

WINDOW & INDOOR GARDENING



EDERT R. W. W.
LIBRARY
AT
CORNELL UNIVERSITY



3 1924 051 784 258



A TOWN WINDOW GARDEN.

Here the scarlet-flowered *Tropæolum lobbianum* is used as an edging to the boxes with white marguerites behind. Simple and effective.

WINDOW AND INDOOR GARDENING.

The Cultivation and Propagation of
Foliage and Flowering Plants in
Rooms, Window Boxes, Balconies
and Verandahs ; also on Roofs,
and on the Walls of the House.

By

T. W. SANDERS, F.L.S., F.R.H.S.

(Knight of the First Class of the Royal Order of Wasa, Sweden.)
Editor of "Amateur Gardening," and Author of "Alphabet of
Gardening," "Encyclopædia of Gardening," "Vegetables and
their Cultivation," "Amateur's Greenhouse," "Flower Garden,"
"Lawns, Greens, etc.," "Bulbs and their Cultivation," etc.

Illustrated.

LONDON :

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, E.C.



LONDON :

PRINTED BY W. H. & L. COLLINGRIDGE,
148 & 149, ALDERSGATE STREET, E.C.



A FOREWORD.

WINDOW and indoor gardening has long been a popular and fascinating hobby with those who possess an enthusiastic love of floriculture, and who have no facilities for indulging in the latter pursuit except in the home, on the window-sill, or in the balcony or verandah. The interest in this phase of gardening is, I find, extending very considerably, and, consequently, information as to the most suitable plants to grow, and how to grow and manage them, is being eagerly sought for.

To meet this demand I have written the present volume, with the object of imparting simple instructions on the cultivation, propagation, and general management of flowering and foliage plants adapted for the decoration of the home, the window-box, balcony, and verandah.

I have, as far as space would permit, dealt with all phases of indoor plants, including such uncommon but very interesting types as orchids and cacti, ferns in cases, and insectivorous plants. Then I have also treated the subjects of window-sill, balcony, verandah, and roof gardening with fulness, and, I hope, presented the reader with a wealth

of information that will enable him to pursue his favourite hobby with success. Nor have I overlooked the fact that it is of equal importance to study the question of adorning the exterior walls of the house with vegetation, and so I have included a couple of chapters dealing with the subject.

The table of contents on the next page will show the variety of subjects included in the volume. If the advice given herein be carefully studied, the window and indoor gardener should have no difficulty in obtaining a great deal of pleasure out of floriculture in the home, on the window-sill, or the balcony.

The reader desirous of making himself more fully acquainted with the cultural details and modes of propagation of the various kinds of plants described herein will find the information in our "Alphabet of Gardening" and "Encyclopædia of Gardening," issued by the publishers of the present work.

1910.

T. W. S.





CONTENTS.

INTRODUCTION	PAGE 7
--------------	-----------

PART I.—WINDOW AND BALCONY GARDENING.

Chap.	I. WINDOW BOXES	10
,,	II. SOIL FOR WINDOW BOXES	13
,,	III. WINDOW BOXES IN SUMMER	14
,,	IV. WINDOW BOXES IN AUTUMN	26
,,	V. WINDOW BOXES IN WINTER	28
,,	VI. WINDOW BOXES IN SPRING	30
,,	VII. FERNS IN WINDOW BOXES	35
,,	VIII. BALCONY GARDENS	38
,,	IX. VERANDAH GARDENS	43
,,	X. ROOF GARDENS	47
,,	XI. WINDOW CASES	57

PART II.—INDOOR PLANTS.

Chap.	I. FOLIAGE PLANTS FOR ROOMS	61
,,	II. FLOWERING PLANTS FOR ROOMS	64
,,	III. BULBS FOR ROOMS	73
,,	IV. FERNS IN ROOMS	81
,,	V. FRUITING PLANTS FOR ROOMS	90
,,	VI. JAPANESE TREES FOR ROOMS	93
,,	VII. CACTI AND SUCCULENTS FOR ROOMS	97

CONTENTS.

							PAGE
Chap.	VIII.	ORCHIDS FOR ROOMS	...	...	...	...	102
„	IX.	INSECTIVOROUS PLANTS	...	...	...	...	104
„	X.	ROSES FOR ROOMS	...	...	...	...	108
„	XI.	HANGING BASKETS	...	...	...	...	110
„	XII.	NOVEL PLANT CULTURE	...	...	...	...	112
„	XIII.	FRAGRANT PLANTS	...	...	...	...	116
„	XIV.	HOUSE GARDENS	...	...	...	...	118
„	XV.	FIRE-PLACE DECORATION	...	...	...	...	126

PART III.—MANAGEMENT.

Chap.	I.	WATERING INDOOR PLANTS	...	...	...	...	129
„	II.	POTTING INDOOR PLANTS	...	...	...	...	131
„	III.	FEEDING INDOOR PLANTS	...	...	...	...	138
„	IV.	HEALTH OF PLANTS	...	...	...	...	141
„	V.	PROPAGATION OF PLANTS	...	...	...	...	145
„	VI.	PESTS AND AILMENTS	...	...	...	...	151

PART IV.—WALL GARDENING.

Chap.	I.	CULTURE OF CLIMBERS ON HOUSE WALLS	...	...	...	...	156
„	II.	CLIMBERS AND SHRUBS FOR WALLS	...	...	...	...	161

PART V.—FLORAL DECORATION.

Chap.	I.	INTRODUCTORY REMARKS	...	...	...	...	169
„	II.	FLOWERS IN ROOMS	...	...	...	...	170
„	III.	TABLE DECORATION	...	...	...	...	182
INDEX			...	...	...	...	188



INTRODUCTION.

GARDENING in all its phases is, as Lord Bacon has truly said, "the purest of human pleasures, and the greatest refreshment to the spirit of man," and this is especially true in the case of window and indoor gardening. No hobby and no recreation ever devised by the wit of man has captivated the heart and mind of man or woman, or yielded such profound and real pleasure to its devotees, as the ancient art and craft of horticulture. If one may believe writers of centuries ago, our forebears were quite as keen and enthusiastic lovers of flowers as we are at the present day, and grew them largely for the decoration of their old lattice windows.

Window and indoor gardening is a phase of floriculture which specially appeals to those who dwell in town, city, and suburb, where there is little, if any, space available for a garden. There, often under the most uncongenial conditions, the cultivation of plants has to be carried out in the home, on the window-sill, balcony, or verandah. And it has astonished us exceedingly, in the course of our rambles in the byeways of the metropolis, to observe the skill shown, and the success obtained, in the cultivation of window gardening. It is, moreover, highly gratifying to note that the taste for this delightful hobby is gradually increasing annually, thanks to the efforts of local authorities, who, by distributing seeds or plants and offering prizes, have done so much to encourage the art.

We observe with great satisfaction the efforts that have been and are being made in our leading cities and towns to encourage the cultivation of window plants by school chil-

dren. Sheffield, more particularly, has done yeoman service in that direction, their annual exhibition of spring bulbs grown in pots being the largest of its kind in the world, and representing something like 10,000 exhibits. Again, we are glad to know that school teachers are taking a keen interest



A SUNNY WINDOW GARDEN.

The sides of the windows are decorated with roses and elemanthes and the sills with boxes filled with zonal pelargoniums, petunias, etc. A pretty, neat and effective arrangement.

in decorating the school windows and rooms with plants, and in that way educating the scholars to appreciate and love the beauties of plant life.

Everyone admits that a love of flowers, the most beau-

tiful of God's works, has a direct tendency to improve the morals of the people generally, and it has been well and truly said that "good morals and good flowers go together." It may almost be regarded as a truism that wherever a man takes a keen interest in his window garden, and the wife in the plants grown indoors, happiness and love reign supreme. The good example set by parents will have its due effect upon the children; the love of flowers will be gradually instilled in their youthful minds, for the love of Nature, as illustrated by plant life, is co-existent with the infant's dawn of consciousness, and as lasting as life, for as the twig is bent so will it grow.

But we must cease this moralising, and say that, apart from the latter aspect, there is a good deal of pleasure to be derived from window and indoor gardening. The man or woman who wants a healthy hobby, and to add to the attractiveness of the home, cannot do better than convert their window-sills and balconies into miniature gardens, plant them with beautiful flowers and shrubs, cultivate them intelligently, lovingly, and skilfully, and in due course reap the well-earned reward of a harvest of floral splendour. Yet more. The delicate invalid who cannot do outdoor gardening may derive untold pleasure and enjoyment in the comfortable atmosphere of his or her room by cultivating plants, ordinary, rare, or curious, in cases or otherwise. Indoor gardening, indeed, is a delightful hobby, and one we can heartily recommend to every man or woman who cannot enjoy the pleasures of an outdoor garden.

Last of all, from a decorative point of view we would like to see window-sill and balcony gardening developed more extensively than it is. We want this feature adopted not only in the congested districts of our cities and towns, but also in our principal streets and thoroughfares in the more fashionable parts. Much is already done in that way in the West End of London, and the effect is certainly very marked. There is no reason, moreover, why our shops should not be florally decorated more than they are. Where this is done the attractiveness of the shop is certainly greatly enhanced.



Part 1.—WINDOW AND BALCONY GARDENING.

CHAPTER I.

WINDOW BOXES.

FOR window-sill gardening boxes are essential if we would grow the plants really well, and ensure pretty effects. Pots have a somewhat ugly look about them, and, besides, the plants do not display their beauty to such good effect as when grouped together in a box. There are, of course, several types of boxes, and we will give a brief description of each.

Earthenware Boxes.—These are made in various patterns, in terra cotta and other earthenware, the most beautiful type being that known as “Doulton” ware. They are, of course, expensive, but where expense is no object, and an artistic box is desired, then by all means procure this type. Being absorbent, they suit the requirements of plant life admirably.

Zinc or Iron Boxes.—These are not so suitable for plant life as the preceding type. Their close texture prevents aeration of the soil, and they are easily affected by

extremes of heat or cold. It is true, they are the most durable type of box. We are opposed to iron boxes, but are disposed to agree to zinc boxes being used as an inner sheeting to earthenware or wooden boxes. It is so easy to lift out a zinc shell, with soil and plants, and change the two,



A NEAT WINDOW-SILL GARDEN.

The box illustrated is supported by brackets fixed to the wall and planted with ivy and zonal pelargoniums and marguerites. One of many effective window-sill gardens attached to shops, etc., at Malvern, in Worcestershire.

if desired. Ample provision must, however, be made for drainage.

Simple Wooden Boxes.—A simple and cheap box may be made of 9in. by 1in. boards, painted green and faced

with virgin cork. The joints should be given a thick coating of red lead paint before they are secured together with wire nails. After fixing, stipple more paint freely in the joints, then give the other parts at least two coats of good green paint, both inside and out. No soil should, however, be placed in the box until the paint has become thoroughly dry. Holes an inch wide should be bored three inches apart in the bottom to allow superfluous water to escape readily.

Ornate Boxes.—Make the box in the same way as advised in the last case, but, instead of facing it with virgin cork, cover it with pieces of split hazel or larch arranged in an artistic design, according to fancy. Secure them by means of small wire nails, and leave the bark on. Give the wood a coat of size, followed by three coats of varnish, and then a good class of box will be produced. Another style of box is one faced with planed wood in panels, and ornamented with fretwork. Anyone handy with tools may ornament the face in many ways. The main principle of a window-box, so far as its body is concerned, is to make it of good wood, well painted, and 9in. wide and 9in. deep, with plenty of drainage at the bottom. Any good carpenter or builder will soon make a serviceable box. The box should be stood on three strips of wood an inch or so square placed on the sill, one at each end and one in the centre. This is to allow air to get beneath the box, and so prevent its rotting.

Window Pot Guard.—This may be made in a simple fashion like a miniature open-paled fence, or with a fretwork facing. The object in each case is to prevent pots falling off the sill, and at the same time rendering them less unsightly from outside.

General Remarks.—On no account buy boxes faced with hideous blue, yellow, or red glazed tiles. These conflict with the colours of the flowers, and often spoil the beauty and charm of the floral arrangement. The more simple the design, and the more unobtrusive the colour, the better. After

all, the object of a box is not so much for its artistic beauty as for its practical utility in holding soil for the plants. A box should be so planted with trailing plants that it is hidden from view—in summer, at any rate. It is a wise precaution to always have the ends of the boxes secured by stout wire to the walls, in order to prevent the former falling over, accidentally or otherwise.

CHAPTER II.

SOIL FOR WINDOW BOXES.

HAVING secured suitable boxes for the sills the next question is to provide adequate drainage and the requisite compost.

Drainage.—It is necessary to place an inch or so of some rough material in the bottom of the box, to enable superfluous water to easily pass through the holes. If the compost were placed directly on the bottom it would soon seal the holes, and the lower compost become waterlogged and sour.

The most suitable material for the purpose is cinders or coke, about the size of walnuts, or broken bricks or potsherds. An inch layer will suffice. Over this should be placed a thin layer of rough soil siftings, moss, tree leaves, or decayed manure. Ample drainage will thus be assured.

Compost.—For ordinary purposes two parts of fairly good garden mould and one part of equal proportions of fresh horse droppings rubbed through a half-inch sieve, and sand or grit will suffice. Those, however, who can afford to spend a few shillings in buying better materials—and

which, by the way, will yield better results—should use a compost of two parts fibrous loam and one part of equal proportions of well-decayed manure, leaf-mould, and silver sand. To each bushel of this mixture add a pint of bone-meal. Old potting mould also makes a good compost, if a little well-rotted manure be added to it, for window-boxes. The ingredients in each case should be thoroughly mixed before they are placed in the box.

We may add here that the composts just advised will suffice for the whole year. The usual plan is to fill the boxes with fresh compost for the summer flowers, and, when these are cleared out in autumn, to be replaced by bulbs, etc.. it has simply to be forked over, adding a handful each of bone-meal and soot before the forking takes place.

CHAPTER III.

WINDOW BOXES IN SUMMER.

It is during the summer period that the majority of folk take the keenest interest in window-sill gardening, owing, no doubt, to the fact that the best results are obtained from a floral standpoint at that season of the year. Window-sill gardening may, however, be practised with success at other seasons, as we shall show later on. For the present our remarks must be confined to the summer period. In dealing with the subject of furnishing the boxes we shall bear in mind the interests of all classes of window gardeners.

A Cheap Display.—Those who want to furnish their boxes at the lowest possible cost should sow hardy annuals in the boxes in March or April. Seeds suitable for the purpose may be purchased in penny packets. Kinds suitable

for the purpose are dwarf mixed nasturtiums, candytuft, Virginian stock, godetias, Meteor marigolds, sunflowers, tall nasturtiums, Canary Creeper, clarkias, eschscholtzias, mignonette, and sweet alyssum.

A sunflower seed or two, or a few seeds of sweet peas, may be sown at the ends of the box, to grow up the sides of the window; seeds of Canary Creeper or Tall Nastur-



A SIMPLE WINDOW GARDEN.

This array of plant growth is made up chiefly of canary creeper, climbing convolvulus, and single petunias; a zonal pelargonium or two are in the background.

tium close to the front of the box, to hang over the side; and seeds of the other annuals behind. A very pretty effect would be obtained by sowing tall nasturtiums in front and dwarf nasturtiums behind.

Another pretty arrangement would be to sow seeds of

Canary Creeper in front, and eschscholtzias behind. Sow the seeds thinly, and afterwards thin the seedlings out to three or four inches apart. A box of Meteor marigolds, edged with Canary Creeper, also makes a charming picture, and so does an edging of Virginian stock with godetias behind. For a shilling it is possible to have an exceedingly cheap and showy floral display during the summer.

A Simple, Inexpensive Display.—At a slightly increased cost a very good display of colour may be obtained by planting half-hardy plants, such as French marigolds, salpiglossis, petunias, lobelias, and verbenas in the boxes in May. Seedlings can at that period be purchased at a cheap rate per dozen, and hence the cost is not a serious item. A box planted with one kind only yields the prettiest effect. Lobelias, however, are an exception; they should be used as an edging.

Superior Displays.—Where expense is not a matter of primary consideration, very showy and artistic floral displays may be made by utilising a more costly class of plants to those previously described. Thus, such plants as ivy-leaved and zonal pelargoniums, heliotropes, yellow and white marguerites, fuchsias, tuberous-rooted begonias, ageratums, lobelias, *Tropæolum lobbianum*, calceolarias, celosias, cupheas, lantanas, tobaccos, and petunias are available for yielding a wealth of blossom; while for coloured foliage the silvery-leaved centaureas, pelargoniums, and cinerarias; purple-leaved colens, iresine, and perilla; and golden-leaved mesembryanthemums and pelargoniums are also at the disposal of the window gardener desirous of obtaining brilliant effects.

Tastes naturally vary as to arrangements, but the modern tendency is to plant boxes with one colour or with one kind of plant. Thus, one frequently observes a box planted solely with pink ivy-leaved pelargoniums, or yellow marguerites, or scarlet or crimson zonal pelargoniums, and the effect is certainly very pretty.



A PRIZE-WINNING WINDOW-BOX.

This box is well filled with scarlet zonal pelargoniums, tuberous begonias, white marguerites, canary creeper, and *Campanula isophylla alba*.

Then, again, two-colour contrast schemes are favoured by some, such as an edging of blue lobelia with white marguerites behind; blue lobelia as an edging and scarlet pelargoniums behind; purple heliotropes behind and golden mesembryanthemums in front; or crimson or scarlet pelargoniums at the back and silvery-leaved ones in front.

Harmonic combinations are obtained by planting salpiglossis, or petunias, or fuchsias, or lantanas, in mixture by themselves in separate boxes. For ordinary purposes a mixture of petunias, pelargoniums, fuchsias, heliotrope, etc., will make an effective display.

Sometimes, also, a box is planted solely with coloured-leaved plants. Thus, *Mesembryanthemum variegatum*, golden-leaved, is used as an edging; then behind this a row of silvery-leaved *Centaurea candidissima* or *Cineraria maritima*, with purple-leaved *Perilla nankinensis* or *Iresine Lindenii* at the back.

Other combinations than those described will, of course, occur to the window gardener. At the end we give a list of plants, with their colours, heights, etc., for the reader to select the kinds and colours he prefers.

Shady Window Boxes.—Our remarks so far have been confined to sunny boxes, and now a word or so with regard to those which get little or no sunshine in summer. Apart from hardy ferns, dealt with elsewhere, there is only a limited number of plants that really do well in shade. For partial shade tuberous-rooted begonias may be strongly recommended as excellent plants for the purpose.

For partial or complete shade fuchsias, Sweet-scented Tobacco (*Nicotiana affinis*), yellow and brown calceolarias, musk, canary creeper, Creeping Jenny, tall and dwarf nasturtiums may be relied upon to do fairly well. Fuchsias and calceolarias will certainly succeed.

Fragrant Plants.—Those who desire to have one or more boxes filled with fragrant-leaved or flowered plants may grow one or more of the following plants: Mignonette,

citron, peppermint, and balsam-scented and oak-leaved pelargoniums, sweet-scented verbenas, sweet-scented tobacco, Balm of Gilead (*Cedronella triphylla*), *Hebenstretia comosa*, and heliotrope. The mignonette may be sown in the box in March; the rest must be procured as plants in May. The perfume of mignonette wafting through the window at early



A SHOWY WINDOW BOX.

This well-arranged window garden consists of a fuchsia in the rear centre, flanked by two white marguerites; zonal pelargoniums and single petunias occupy the middle; blue lobelia and brown-leaved *Oxalis corniculata rubra* furnish the foreground. The glossy green foliage of Veitch's Virginian creeper on the walls forms an effective setting for the whole.

morn, or of the sweet-scented tobacco in the evening, is very pleasing.

Hardy Plants.—A charming effect may be obtained in summer by growing dwarf snapdragons in variety in

window-boxes. Strong seedlings should be planted in April, plenty of old mortar being previously mixed with the soil. *Violas*, too, do well in sunny window-boxes if the plants are kept moist, and all spent flowers regularly removed. *Pansies* are also good plants to grow in shade or partial shade. We have seen *Campanula isophylla* (blue) and *Isophylla alba* (white) grown very successfully in sunny boxes, the plants when in bloom making a splendid show. *Marguerite carnations* are very popular plants for window-box culture on the Continent, and we see no reason why they should not do equally well here.

Window-box Gardening in London.—The following remarks, contributed to “*Amateur Gardening*” by “*I. L. R.*,” afford so much useful information and helpful suggestions on window gardening in London that we reproduce them here:

“If we examine the contents of a considerable number of window-boxes in the neighbourhood of London, about three-fourths of them will be filled with white *marguerites* at the back, scarlet *geraniums* in the middle, and blue *lobelia* at the edge. Now these plants make a very pretty box, and are, moreover, the national colours, and for these reasons we have nothing to say against them, except that they are so terribly common that it is quite a relief to see a home decorated with other plants.

“Where the aspect is a sunny one there is a wide choice of plants, and a little taste and originality in grouping them will be needed. Three straight rows of anything do not give so good an effect as a taller central plant, with a plant on each side also raised a little above the others, the rest of the box being suitably filled in at a slightly lower level. For the central plant a place should be kept by placing an empty pot, rather larger than that which it is to hold, in the middle before filling in the soil or *jadoo*; and the same plan may be followed in a box of considerable length, for the two higher plants will be placed half-way between the centre plant and the ends of the box, so that in this way we can change the

most important plants (which will be kept in their pots) at will, if they should go out of flower, for others.

"Pot roses, either red, white, or apricot-coloured, are charming for these three positions in early summer, the box being filled in with forget-me-nots (moved when in bloom, and kept very damp) and clumps of Her Majesty white pinks, also raised with plenty of soil from the garden. These flowers, with red roses, make a beautiful and uncommon box, but they do not last in beauty beyond June; they should be taken out as soon as the tuberous begonias are in bloom, when fine plants of these flowers may be substituted for the pinks, and a palm or dracæna may take the central place, with a pot of *Eulalia zebrina* (striped grass), or a young *Grevillea robusta* of suitable height can be slipped into the empty pot at each side. Tuberous begonias need extra foliage to show them off; coleus may be used at the back of a broad box, and blue lobelia, alternated with white lobelia, will contrast well with them in front.

"Petunias do well in boxes, making handsome masses of purple bloom, and yellow calceolarias or marguerites can be used with them (in the centre and at the sides), adding long trails of sedum, in silvery green, to cover the box with its light fringe.

"Ivy-leaved pelargoniums are invaluable plants for a hot, dry position, for they stand heat better than others, and can be used to cover the box, trailing over it, and making a bright mass of colour. Madame Crousse, in soft pink, is very floriferous and effective; Jeanne d'Arc is white, and both are semi-double. For a deep red ivy-leaved pelargonium nothing excels Corden's Glory; and Souvenir de Charles Turner is a very fine bloom in carmine-pink; both are also double.

"In choosing the colours for a window-box it is well to recollect the tint of the house, as this has much to do with an effective arrangement, pink or red flowers showing well on a grey or cold-coloured house, whilst white or blue flowers and silvery foliage suit a red brick house.

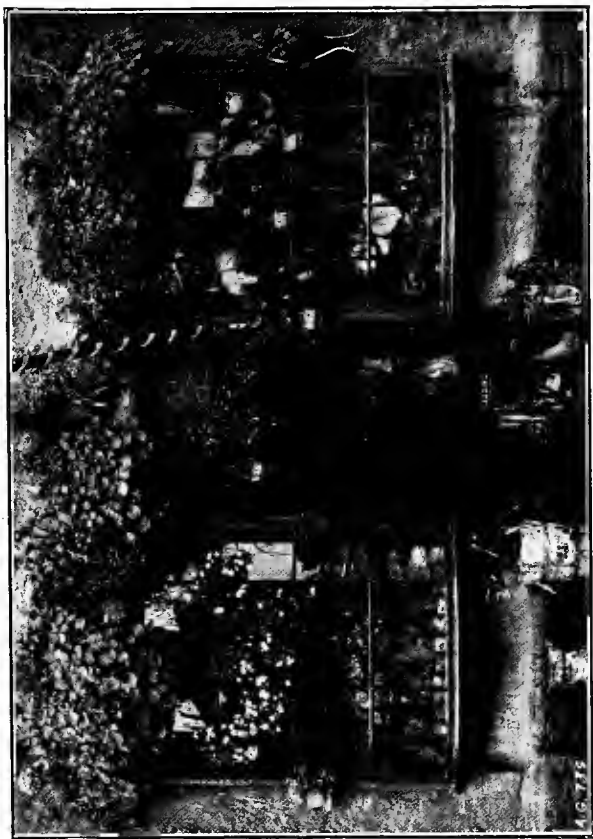
"But the magenta shades of these pelargoniums are not

suitable; they need a mass of greenery to tone them down, and do not harmonise well with other warm-tinted flowers. The fibrous-rooted begonias, with a mass of small pink, red, or white flowers, are lovely in a western window-box, where the sunshine is not too strong for them; *Alba Picta*, with white flowers and handsome marbled foliage, is good; *Weltoniensis* produces a continuous quantity of bright pink blossoms, with crimson-veined leaves; and *Vernon* has bronze foliage and deep-red flowers.

“Dwarf cannas, such as *Queen Charlotte* (crimson and gold), *Alphonse Bouvier* (vivid crimson), or *Hypolite Flaudron* (salmon-pink), are very suitable for a warm window (when brought on in the greenhouse), filling the central places most effectively. *Coleus* foliage shows them off, with blue *lobelia* intermixed to trail over the front; dwarf zinnias, too, may be planted amongst the *coleus* to give vivid colouring; or asters, towards the autumn, for these plants can be raised with a good ball of moist soil just as they open their buds.

“Hydrangeas are excellent plants for boxes, either in sunshine or shade; their blossoms last longer without much sunshine, especially those of the pure white variety (*Thomas Hogg*), and this is dwarf and very floriferous, too. *Heliotropes*, *pelargoniums*, and many other flowers may be selected for a similar purpose, if desired.”

Sweet Peas.—These, also, may be grown with fair success in sunny window-boxes. The shoots can either hang over the front of the box or be supported in a vertical position by means of feathery sticks. The seeds may be sown 4in. apart and 2in. deep in the box, in February; or strong seedlings purchased in three-inch pots from a specialist in April, and planted 6in. apart in the box. Good soil must be provided, and this kept moist. When the plants begin to flower, supply weak liquid manure once a week. No seeds must be permitted to develop, and the tops of the plants should be nipped off when the shoots are 3ft. high.



A HAIR DRESSER'S WINDOW (GARDEN).

Boxes filled with plants rest on the top of the quaint bay windows, while inside campanulas are suspended from the top, and the base is occupied by a pretty floral miscellany. Clearly the work of a gardening enthusiast.

FLOWERING PLANTS FOR BOXES.

Name	Height.	Colour.	Habit.
Begonias Tuberous-rooted	8 in. ...	Various	Dwarf.
„ Fibrous rooted	8 in. ...	Various	Dwarf.
Calceolarias	1 ft. ...	Yellow	Medium.
„	1 ft. ...	Brown	Medium.
Cannas (Dwarf only) ...	2 to 3 ft.	Crimson, etc. .	Tall.
Cuphea platycentra ...	1 ft. ...	Scarlet, white	Dwarf.
Fuchsias	1 to 2 ft.	Various	Tall.
Gazania splendens ...	6 in. ...	Orange, etc. ...	Drooping.
Heliotropes	18 in. ...	Mauve, purple ...	Medium.
Lantanas	1 ft. ...	Crim., yell., pink	Medium
Lobelias	6 in. ...	Blue and white ..	Drooping.
Marguerites	1 to 2 ft.	Yellow, white ...	Tall.
Musk Common	6 in. ...	Yellow	Dwarf.
„ Harrison's	8 in. ...	Yellow	Dwarf.
Pelargoniums Ivy... ..	6 in. ...	Crim., pink, etc....	Drooping.
„ Zonal	1 ft. ...	Crim., pink, etc....	Medium.
Petunias Single	1 ft. ...	Purple, white ...	Medium.
„ Double	1 ft. ...	Purple, white ...	Medium.
Salvia patens	2 ft. ...	Blue	Tall.
„ alba	2 ft. ...	White	Tall.
Tropæolum Ball of Fire ...	3 ft. ...	Scarlet	Drooping.

HARDY ANNUALS FOR BOXES.

Name.	Height.	Colour.	Habit.
Canary Creeper	3 to 4 ft.	Yellow	Climbing.
Candytuft	6 in. ...	Carmine or white	Dwarf.
Clarkias	18 in. ...	Pink, white	Medium.
Eschscholtzias	1 ft. ...	Carmine, yellow ..	Dwarf.
Godetias	1 ft. ...	Various	Dwarf.
Marigold Meteor	18 in. ...	Orange	Medium.
Nasturtium Dwarf	6 in. ...	Various	Dwarf.
„ Tall	3 to 4 ft.	Various	Tall.
Mignonette	1 ft. ...	Red, white	Dwarf.
Sunflower	4 to 6 ft.	Yellow	Tall.
Sweet Alyssum	6 in. ...	White	Dwarf.
„ Peas... ..	3 to 4 ft.	Various	Tall.
Virginian Stock	4 in. ...	Red and white ...	Very dwarf.

TENDER ANNUALS FOR BOXES.

Name.	Height.	Col or.	Habit.
Asters China ...	1 ft. ...	Blue, white, etc.	Dwarf.
Celosia pyramidalis ...	2 to 3 ft.	Crim., yellow ..	Tall.
Nicotiana affinis ...	2 ft. ...	White	Medium.
Marigold French ...	1½ ft. ...	Orange, etc. .	Medium.
Phlox Drummondii ...	1 ft. ...	Various ...	Dwarf.
Salpiglossis ...	18 in. ...	Various	Medium.
Stocks Ten-week ...	8 in. ...	Blue, red, white .	Dwarf.

FOLIAGE PLANTS FOR BOXES.

Name.	Height.	Foliage.	Habit.
Centaurea candidissima ...	8 in. ...	White	Dwarf.
Cerastium tomentosum ...	6 in. ...	White	Drooping.
Cineraria maritima ..	8 in. ...	White	Dwarf.
Cnicus casabonæ ...	8 in. ...	White and green.	Dwarf.
Coleus verschaffelti ...	1 ft. ...	Purple	Medium.
Eulalia Japonica variegata	3 ft. ...	Silvery	Tall.
Fuchsia Sunray ...	18 in. ...	Crimson, yellow ..	Medium.
„ Cloth of Gold ...	18 in. ...	Golden	Medium.
Iresine Herbstii ...	1 ft. ...	Crimson	Dwarf.
„ Lindenii ...	1 ft. ..	Red or purple ...	Dwarf.
Nepeta glechoma varie-			
gata	2 in. ..	Silvery	Drooping.
Pelargonium L'Elegante...	1 ft. .:	Silvery	Dwarf.
„ Crystal Palace			
„ Gem ...	6 in. ...	Golden	Dwarf.
„ Flower of			
„ Spring ...	1 ft. ...	White	Dwarf.
„ Mangle's varie-			
gated ...	1 ft. ...	White	Dwarf.
„ Lady Ply-			
mouth .	1 ft. ...	White	Dwarf.
Perilla Nankinensis ...	1 ft. ..	Purple	Dwarf.
Pyrethrum aureum ...	6 in. ...	Yellow	Dwarf.
Sedum acre aureum ...	4 in. ...	Yellow	Very dwarf.
„ „ elegans ...	4 in. ...	Silvery	Very dwarf.
Zea Japonica (Maize) ...	3 ft. ...	Silvery	Tall.

CHAPTER IV.

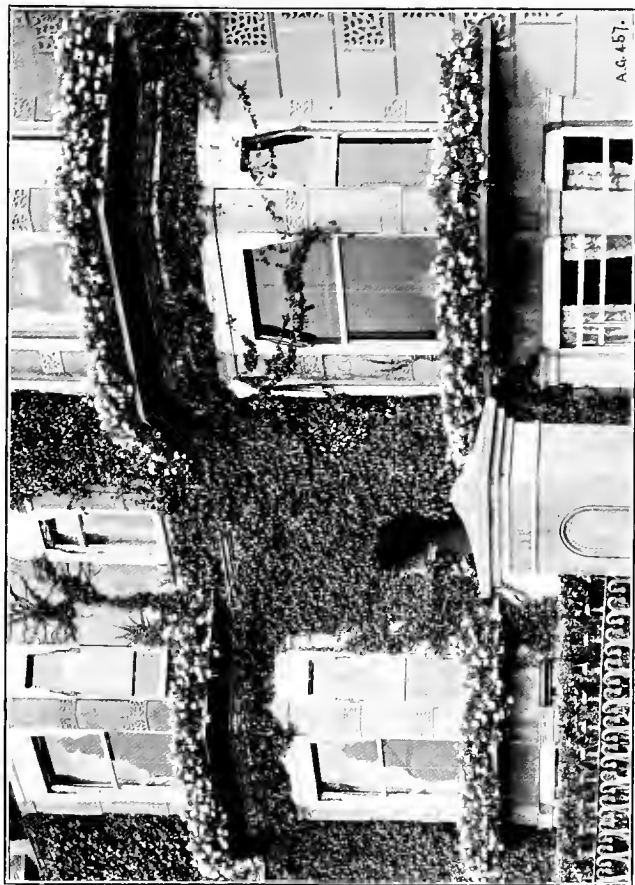
WINDOW BOXES IN AUTUMN.

THERE is very little to be said about window gardening in autumn. The summer display in favourable seasons lasts till the end of September, and, beyond early and semi-early chrysanthemums, which may, it is true, be had in flower in October, there is practically nothing left in the floral line to decorate window-boxes in autumn. Indeed, directly the summer display is finished it is usual to at once furnish the boxes with shrubs for the winter season.

Chrysanthemums.—If these are required for window-box decoration the plants must either be purchased in flower in September or October, or be grown on in pots in some sunny spot all the summer. The latter is by no means an easy task for those with limited space, as the plants require plenty of room to grow them properly.

The young plants have to be reared annually from cuttings in spring, grown on indoors till May, then placed outside and planted in six or eight-inch pots in June. The point of the main shoot must be removed about April, and when side shoots have formed four to six inches long their points must also be removed. This will ensure the formation of nice bushy plants by September. If large flowers are desired thin out the buds when the size of a small pea. The better plan, however, would be to purchase plants in flower.

Varieties. — Japanese: Goacher's Crimson; Carrie, yellow; Polly, orange; Merstham Bronze, bronze; Market White; and Normandie, pink. Pompons: Yellow Gem, Blushing Bride, and Little Bob.



A.G. 457.

A NEAT AND SHOWY WINDOW GARDEN.

The walls are covered with *Ampelopsis Veitchii* and the window boxes planted with mixed petunias.

CHAPTER V.

WINDOW BOXES IN WINTER

OF course, there can be no floral display in window-boxes during the winter months, because, until the snowdrop appears, there are practically no flowering plants suitable for box culture. But it is possible to have attractive window-boxes by using other subjects, such as berry-bearing, green, and variegated shrubs. Nice dwarf specimens in pots can be obtained at any nursery or florist's in November and onwards, that will add lustre and beauty to the window-box from then up till the period for supplanting them with summer flowers. Following are suitable kinds for the purpose:

Berry-bearing Shrubs.—The Prickly Heath (*Pernettya mucronata*) and its several varieties is one of the most attractive of berry-bearing shrubs. These bear berries of the size of pea seeds and of shades of crimson, rose, pink, purple, and white, so freely that the plants have a decidedly ornamental effect. Then there are also two species of skimmias which bear showy berries. One is *S. japonica* with bright green foliage and red berries, and the other is *S. Fortunei* with glossy foliage and crimson berries. Tree ivies, again, are to be had with black or yellow berries. These are grown as neat bushes or as standards, with clear stems and branches at top. There are green, golden, and silver-leaved kinds.

Variegated Shrubs.—The green, golden, and silver-leaved euonymuses, which thrive so well in seaside gardens, make extremely pretty plants for window boxes. The best sorts are *E. japonicus latifolia aureus*, golden-leaved; *E. japonicus argenteus variegatus*, silver-leaved; and *E. radicans variegatus*, a slender-stemmed variegated kind suitable for the front of a box. *Aucuba japonica* is another pretty shrub, with green leaves mottled with yellow; Golden Privet,

golden-leaved, also very ornamental; *Cupressus lawsoniana* *lutea* and *albo-spica*, shoots yellow or white tipped; and the Periwinkle (*Vinca elegantissima*), with creamy-white shoots, are further attractive kinds.

Green-leaved Shrubs.—The most suitable kinds are: Box (*Buxus sempervirens*), *Euonymus japonicus* and *microphylla*, *Juniperus tamariscifolia*, *Ligustrum japonicum*, *Mahonia aquifolia*, *Osmanthus ilicifolius*, *Retinospora plumosa*, *Taxus baccata elegantissima* (yew), *Thuia dolobrata*, *Cupressus lawsoniana* and its varieties *Nana* and *Shawii*, and *Veronica Traversii*.

Arranging the Shrubs.—They may be grown in pots stood on the sill and protected by an ornamental skeleton box, or stood inside an ordinary window-box from which the mould has been removed; or their pots plunged in the mould; or, better still, be turned out of their pots and planted in the soil. When grown in pots exposed to the weather there is a risk of the pots being cracked by the frost.

If the pots are plunged this risk is obviated; but, if planted in mould, the shrubs have a more natural appearance. Besides, it is possible then to plant a few bulbs between the shrubs, and so add to the attractiveness of the arrangement in spring.

If the planting method be adopted, green and variegated ivies, periwinkle, and *Euonymus radicans* may be planted close to the edge to trail over the front, and then the green, variegated, and berry-bearing shrubs may be arranged in mixture, according to taste, behind. Golden Privet and green-leaved *Cupressus lawsoniana* look well together; so do aucubas, *thuias*, and mahonias. Plant fairly close together, and press the soil down firmly.

Treatment.—Directly after planting give the soil a thorough watering. Afterwards water will probably not be needed till the warm days of spring arrive. Those in pots will only require water about once a month. When May

arrives the shrubs, of course, will have to give place to the summer plants.

If the shrubs in pots have been well cared for they may



(Photo : K. F. Watkinson, Goodmayes.)

A SHADY WINDOW GARDEN.

Suspended is a plant of *Asparagus Sprengeri*; in the background are two *aspidistras*; in the foreground, looking left to right, *Creeping Jenny*, *Tradescantia zebrina*, and the white *Campanula isophylla alba*.

be worth retaining for another year, in which case place them in some sunny corner and keep them well watered.

Those planted out will have to be repotted. As a rule, shrubs grown in window-boxes lose a good deal of foliage, and have a by no means healthy look at the end of the season. It is, on the whole, better to buy fresh ones annually and to plant the others in the garden, or throw them away.

CHAPTER VI.

WINDOW BOXES IN SPRING.

IN spring there will be little difficulty experienced in securing a gay display of flowers in window-boxes, as at that season plenty of bulbous-rooted plants are available. These, with forget-me-nots, primroses, polyanthuses, and wall-flowers, to say nothing of other hardy plants, will assist in making window-sills exceedingly attractive from March onwards.

Ordinary Bulbs.—Taking bulbs into consideration first, there are hyacinths, tulips, narcissi, crocuses, scillas, and snowdrops among the commoner kinds. These may be grown in mixture, or in one or more kinds in each box.

The most attractive and tasteful arrangement is to plant, say, mixed crocuses, or scillas and snowdrops, as an edging, and mixed tulips or hyacinths behind. If one-colour schemes are preferred, then plant one variety of hyacinth or of tulip. Narcissi look well grown by themselves, with an edging of yellow crocuses.

The bulbs of hyacinths, tulips, and narcissi should be planted about three inches deep and the same distance apart; those of the crocus, snowdrop, and scilla two inches deep and two inches apart, or even one inch would be better. Simply fork up the soil in which the summer plants were grown, and plant the bulbs in October.

Where a box is fairly wide, say a foot in width, a brilliant effect may be produced by planting a row of crocuses as an edging, followed behind by a row of tulips, then one of hyacinths, and one of narcissi at the back.

Choice Bulbs.—Where expense is not a consideration much pleasure may be derived from the culture in window-boxes of such choice bulbs as *Chionodoxa luciliæ* and *sardensis*, *Muscari botryoides*, *botryoides alba*, and *conicum* "Heavenly Blue," *Crocus Sieberi*, *Iris Histrio*, *histrioides*,



A WINDOW-SILL GARDEN IN SPRING.

An earthenware box of simple design filled with various varieties of daffodils. Very pretty.

alata, and *reticulata*, *Brodiaea uniflora*, *Narcissus bulbocodium*, *Johnstoni*, *moschata cernuus pulcher*, *cyclamineus*, and *triandrus albus*, *Galanthus Fosteri*, and the lovely Darwin and May-flowering tulips.

These charming bulbs should be grown in little colonies of half a dozen or so, the tiny beds being outlined by a few small pieces of stone or rock depressed slightly in the soil. The Darwin and May-flowering tulips should be grown as

advised for ordinary bulbs. A little leaf-mould and silver sand should be mixed with the soil; in fact, it would be better to prepare a special compost of two parts sandy loam and one of equal proportions of leaf-mould and silver sand for all the bulbs mentioned, except the tulips. Plant the bulbs about two inches deep and an inch apart in September. Those which flower in February should have their delicate flowers protected by means of a small bell-glass.

The foregoing choice bulbs must remain in the box until their leaves fade; then they should be taken out of the soil, dried, and stored in a cool place till autumn.

Mixed Bulbs and Plants.—A very pretty effect may be ensured by planting hyacinth, tulip, and narcissi bulbs in groups of three, then leaving a space between each group to plant a primrose, polyanthus, forget-me-not, or wallflower. The bulbs flower early, and when they have lost their charm the plants come into blossom and keep the box gay till June. The plants can be put in at time of planting the bulbs or in March. Bulbs may also be grown between the shrubs, as advised in the chapter on winter window-boxes.

Hardy Plants.—Yet another arrangement would be to grow double-flowered arabis, polyanthuses, forget-me-nots, wallflowers, aubretias, and auriculas in window-boxes, planting them in autumn in the soil in which the summer flowers were grown. However, as these do not flower till late in the spring the boxes are devoid of colour earlier in the season, and, on the whole, it is preferable to grow them in conjunction with bulbs.

Management.—In the early spring, when the sun attains power, it will be necessary to give an occasional watering. Even in rainy weather it often happens that the soil in boxes obtains little moisture, owing to the eaves diverting the rainfall. No manure will be required for the bulbs, but the plants may be given an occasional dose.

After flowering, the bulbs will, of course, have to make



A. G. 1786.

SCORPION IRIS (*Iris alata*).

This lovely bulb bears blue flowers in January and February, and is a decidedly pretty plant to grow in pots or in boxes.

way for the summer flowers. In May, therefore, lift the bulbs and replant them in the garden or in a spare box to complete their growth. As a rule, hyacinths, tulips, narcissi, crocuses, and snowdrops rarely flower satisfactorily a second year in boxes. To obtain the best effects fresh bulbs should be procured annually, and the old ones planted out in the garden.

Wallflowers and forget-me-nots should be discarded. Primroses, polyanthuses, and auriculas must either be grown in pots in the shade or planted out in the garden. If properly cared for they will flower well another year.

BULBS FOR WINDOW BOXES.

Name.			Colour.	Flowering Period.	Height.
<i>Allium Neapolitanum</i>	...	...	White ...	May ...	18 in.
<i>Brodiaea uniflora</i>	...	...	White, blue ...	May ...	6 in.
<i>Chionodoxa lucilæ</i>	...	...	Blue and white ...	March ...	6 in.
<i>sardensis</i>	...	...	Blue ...	March ...	4 in.
<i>Crocus reticulatus</i>	...	...	White, lilac ...	March ...	3 in.
<i>Sieberi</i>	...	...	Lilac ...	March ...	3 in.
<i>Galanthus Elwesii</i>	...	...	White ...	January ...	8 in.
<i>Fosteri</i>	...	...	White ...	February ...	6 in.
<i>nivalis</i>	...	...	White ...	February ...	6 in.
<i>Hyacinth</i>	...	...	Various ...	March ...	1 ft.
<i>Iris, Histrio</i>	...	...	Lilac ...	February ...	6 in.
<i>histrioides</i>	...	...	Blue, yellow, etc...	February ...	6 in.
<i>reticulata</i>	...	...	Blue yellow, etc...	February ...	6 in.
<i>Muscari botryoides</i>	...	...	Blue ...	March ...	6 in.
<i>album</i>	...	...	White ...	March ...	6 in.
<i>"Heavenly Blue"</i>	...	...	Blue ...	April ...	6 in.
<i>Narcissus bulbocodium</i>	...	...	Yellow ...	April ...	6 in.
<i>Johnstonii</i>	...	...	Yellow ...	March ...	1 ft.
<i>Jonquil</i>	...	...	Yellow ...	April ...	6 in.
<i>cernuus pulcher</i>	...	...	White and yellow	February ...	1 ft.
<i>poeticus ornatus</i>	...	...	White and scarlet	May ...	18 in.
<i>cyclamineus</i>	...	...	Yellow ...	March ...	6 in.
<i>triandrus albus</i>	...	...	White ...	March ...	6 in.
<i>Scilla sibirica</i>	...	...	Blue ...	February ...	6 in.
<i>Tulip Early</i>	...	...	Various ...	March ...	8 in.
<i>Darwin</i>	...	...	Various ...	May ...	1 ft.
<i>May-flowering</i>	...	...	Various ...	May ...	1 ft.

CHAPTER VII.

FERNS IN WINDOW BOXES.

WINDOW-SILLS facing north, or in a position which gets little or no sun, may be utilised to advantage for the growth of hardy ferns in boxes. Ferns are such interesting plants to cultivate that we are quite sure they will yield a vast amount of pleasure to those who undertake to grow the kinds described hereafter.

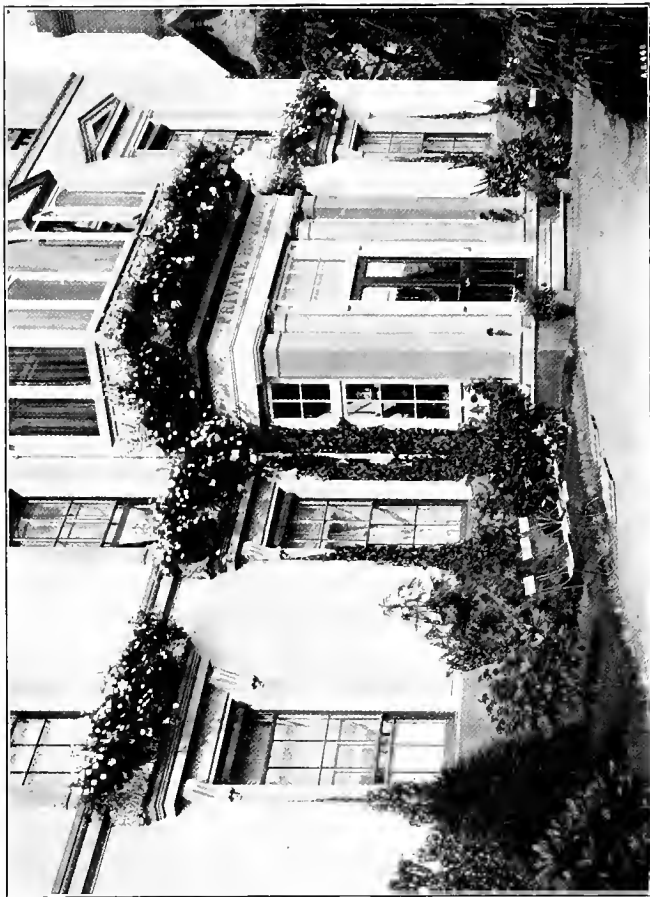
Position.—Many windows are so placed that they get little or no sun upon them. It is almost useless attempting to grow flowering plants in such a situation, as they require sun. Ferns, however, are at home in these shaded positions, and may be cultivated with the greatest ease. If proper varieties are selected, the right kind of soil provided in which to plant them, and sufficient water supplied from time to time as necessary to keep the soil moist, they will prove a source of much pleasure, and make a wonderful improvement in the appearance of the window as seen from the outside, besides presenting cheerful and beautiful objects from the room.

Boxes.—The boxes need not be of an expensive style; plain wood is the best. They should be made as deep and wide as the window-sills will allow. Holes should be bored through the bottom to allow the escape of water; the front, top edges, and as much of the back part of the box as can be seen from the room should be covered by virgin cork. This gives it a more rustic appearance than any other material. The soil should consist of a mixture of loam, leaf-mould, and sand, about equal quantities of each, and a little peat may also be added.

Kinds for Large Boxes.—The following ferns are

the best for window-boxes, and will be found easy of cultivation. As boxes vary considerably in size, the ferns must be selected accordingly. As a guide in the selection, the letters "L," "M," and "D," placed after the names, indicate that those so marked are respectively of "large," "medium," or "dwarf" habit of growth. *Nephrodium*, or *Lastrea Filix-mas*, the Male Fern (L.), is a very hardy and free-growing species, forming nice plants with an abundance of foliage. *Asplenium*, or *Athyrium Filix-fœmina*, the Lady Fern (L.), is a graceful and pretty species, also of free growth. *Nephrodium spinulosum dilatatum*, the Broad Buckler Fern (L.), is another handsome free-growing species. *Nephrodium*, or *Lastrea montana*, the Mountain Buckler Fern (M.), is a charming species with light green and scented fronds. *Aspidium*, or *Polystichum aculeatum*, the Hard Prickly Shield Fern (L.), is a handsome kind; *Aspidium angulare*, the Soft Prickly Shield Fern (L.), is very pretty, and of free growth; *Scolopendrium vulgare*, the Hart's Tongue Fern (M.), is a general favourite, and, by reason of its distinct foliage, contrasts nicely with the other kinds referred to; *Nephrodium rigidum*, the Rigid Buckler Fern (M.); *Nephrodium æmulum*, the Hay-scented Fern (M.); and *Nephrodium spinulosum*, the Spiny Buckler Fern (M.), are all desirable species.

Kinds for Small Boxes.—For smaller boxes, or for intermixing with the larger kinds, there is a number of pretty dwarf-growing ferns, such as *Polypodium Dryopteris*, the exceedingly pretty Oak Fern; *P. Phegopteris*, the Beech Fern; *P. Dryopteris robertianum*, the Limestone Polypody; *Cryptogramme crispa*, the Mountain Parsley Fern; *Asplenium adiantum-nigrum*, the Black Maidenhair Spleenwort; *Asplenium trichomanes*, the Black-stemmed Spleenwort; *Asplenium viride*, the Green-stemmed Spleenwort; *Asplenium Ceterach*, the Scaly Spleenwort; *Cystopteris fragilis*, the Bladder Fern; *Lomaria spicant*, the Hard Fern; *Polypodium vulgare*, the Common Polypody; *Polypodium v. cambricum*, the Welsh Polypody; and *Asplenium lonchitis*, the



A HOTEL WINDOW GARDEN.

A scheme in lilac and purple. Purple petunias and lilac heliotropes were the plants used, and a charming effect was produced.

Holly Fern. Besides these species there are also many exceedingly pretty and interesting varieties, but those already named will be found very suitable for the purpose under consideration, all being hardy and easy of culture.

North American Ferns.—There are several North American species that intermix well with the British, and, as they differ in appearance and are quite as hardy, they may be planted together with advantage. *Nephrodium intermedia* (M.), *N. marginale* (M.), *Osmunda gracilis* (M.), *Aspidium acrostichoides* (M.), *A. munitum* (L.) (a handsome species, very hardy, and a free grower), *Woodsia ilvensis* (D.), *W. obtusa*, and *Woodwardia angustifolia* (M.), the Chain Fern, are all worthy of cultivation.

From the large number of different species named it will be recognised that, even for window-boxes, there are quite sufficient kinds to select from to enable anyone to possess a very interesting collection. It must be borne in mind that, owing to the exposed situation of many window-boxes, only those plants that will bear a reasonable amount of wind are suitable. The foregoing are of this description.

Cultural Details.—After the ferns are planted they should be well watered, and if the soil is then covered by a layer of common wood moss in flakes the appearance will be greatly improved, and the soil will not dry so rapidly. The moss will also prevent any splashing up of the soil upon the windows, which often occurs during heavy showers if this precaution be not taken. It will be a further improvement to the appearance if there are planted at the edges of the box a few ivies or other trailing plants to hang down. Some of the small-leaved ivies are very suitable for this purpose. The ferns should be frequently examined that water may be given whenever necessary to prevent their becoming dry. This should be well looked after during summer, and, indeed, during any part of the year when there is an unusual length of time without rain, as ferns soon suffer if short of moisture in the soil, and vigorously growing, healthy plants might be spoiled from this cause.

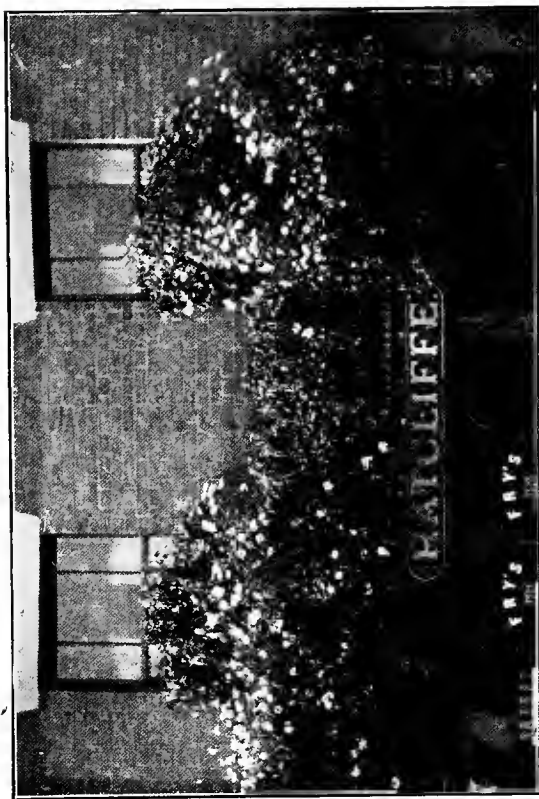
CHAPTER VIII.

BALCONY GARDENS.

IN cities and towns the lover of flowers has to utilise every available inch of outdoor space for practising his or her favourite hobby. Every window-sill is requisitioned by the enthusiast, and if he happens to possess a balcony this also is turned to account for flower growing. A balcony, of course, is a small platform projecting from the main building, and fringed with open ornamental masonry or iron. It is, moreover, open at the top, not covered by a roof as in the case of a verandah. The latter type of structure will receive attention in a separate chapter. Access to a balcony is usually obtained by means of a French window, and this, reaching to the base, affords a good view from the room of any floral decorations that may be attempted thereon.

Boxes.—It naturally follows that any plants utilised for balcony decoration must be grown in pots or boxes. Of the two the latter are preferable. They should be 9in. to 1ft. wide and 1ft. in depth, be made of earthenware or wood, and have plenty of holes bored in the bottom to allow superfluous water to escape. If made of wood, have them painted a dark green colour.

Zinc boxes may be made to fit in the wooden ones, if desired. These will help to extend the life of the outer shell, besides enabling the soil and plants to be easily removed or changed. Strips of wood 2in. square should be placed under the boxes at intervals of 1ft. to keep the box off the floor and allow air to pass beneath. The boxes should be arranged around the ends and front, and on each side of the window against the house wall. Place an inch of drainage in the boxes and fill these with compost, as advised for window-boxes.



BALCONY GARDEN OVER A SHOP FRONT.

The plants used are fuchsias, marguerites, ivy-leaved pelargoniums, petunias, and nasturtiums. An excellent idea for attracting the attention of customers, and one which should be more generally adopted than it is.

Climbers for House Wall.—For decorating the house wall on each side of the window such flowering climbers as *Clematis Jackmanii*, purple; *C. Lady Caroline Nevill*, lavender; or *C. Jackmanii alba*, white; *Passiflora cœrulea*, blue; *P. cœrulea Constance Elliot*, white, would be suitable for training to the wall or to a wire or lattice-work trellis fixed thereto. Planted in the boxes at the ends, and properly looked after as regards watering, feeding, and pruning, these would grow satisfactorily for several years.

It must be borne in mind that the plants described cannot be expected to grow so vigorously, or continue to flourish for so many years, within the limited area of a box as in a bed in the garden. But, as they are not very expensive, it will not be a serious matter to renew the plants and soil every three or four years.

Clematis Jackmanii will require its previous year's shoots to be shortened every February to about 1ft. from their base, to encourage strong flowering shoots to form. *Lady Nevill* must only need to have weak or dead growths and the tips of the previous season's shoots removed at same time. The *passifloras* (Passion flowers) must also have any weakly or sickly growths cut away, and the last year's shoots shortened one-third in February.

We know from experience that many would like to grow roses on a balcony. Our earnest and candid advice is, do not attempt such a thing—it can only end in disappointment. Roses cannot withstand the confined area of a box or the draughty, exposed position of a balcony. The experiment has been tried over and over again, and has always proved a failure.

Good temporary climbers for the summer season only are the Tall *Nasturtium* (*Tropæolum majus*), red or yellow; the Canary Creeper (*Tropæolum aduncum*), yellow; and Lobb's *Nasturtium* (*Tropæolum lobbianum*), scarlet. Strong plants of these planted in the boxes in May, and the shoots trained to the wall, will make an attractive display as the season advances. If well watered, and fed occasionally with artificial manure, the plants will grow many feet high.

Climbers for Shady Balconies.—So far our remarks have been confined to sunny balconies. As there are balconies that get little or no sunshine, and where flowering climbers would not blossom satisfactorily, we must advise as to other suitable climbers for such positions.

First of all there is the Virginian Creeper, or *Ampelopsis* (*Vitis quinquefolia*). This well-known deciduous climber will do very well in a box if well cared for, cover a considerable space with refreshing green foliage in summer, and richly-tinted leafage in early autumn. Next comes the green ivy. This, of course, is an evergreen, and, while it will not grow as freely as the Virginian Creeper, it will, nevertheless, make a neat creeper for the wall, and look nice all the year round. Veitch's *Ampelopsis* (*Vitis inconstans*) is a neat growing and self-clinging deciduous creeper which also might be grown in a similar position.

Summer Flowers.—During the summer months the front and sides of the balcony may be made most attractive by planting *Tropæolum lobbianum*, ivy-leaved pelargoniums, single petunias, or lobelias in front of the box, so that their shoots may protrude through the balustrades or railings, and filling the space behind with geraniums, fuchsias, marguerites, heliotropes, or any of the plants advised for window-boxes.

These plants can be grown in mixture, or in schemes of pink, scarlet, crimson, yellow, white, or purple, as taste demands. Thus, a yellow scheme may consist of the Canary Creeper as a trailer, and yellow marguerites behind; a pink one of pink ivy-leaved pelargoniums as trailers and pink zonal pelargoniums behind; a scarlet or crimson one of ivy and zonal pelargoniums, or the latter with *Tropæolum lobbianum* as a trailer; a purple one of petunias in front and a dark heliotrope behind; a white one of white petunias in front with white marguerites behind, and so on. Hardy annuals, as advised for window-boxes, may also be used if a cheap display be desired. For shady balconies fuchsias, calceolarias, musk, or hardy ferns may be utilised.

Sweet-scented Tobacco (*Nicotiana affinis*), musk, and mignonette make delightful scent-yielding flowers for a sunny balcony.

Autumn Flowers.—These are extremely limited, and, indeed, confined to early and mid-season chrysanthemums, as advised for window-boxes in autumn.

Winter Plants.—Here, again, the winter decoration of the balcony is practically identical with that of window-boxes, and the same kinds of shrubs must be used. However, the shrubs may in this case be of a larger size. The reader is advised to read the advice given on p. 27, and to apply it to his balcony boxes.

Spring Flowers.—Bulbs and such vernal-blooming plants as wallflowers, primroses, forget-me-nots, etc., will combine to make the boxes on a balcony very attractive for the spring season. The advice given on p. 30 applies equally to balcony boxes, so that we need not reiterate our previous remarks.

General Hints.—We now come to the general management of plants in balcony boxes. First as to watering: During the spring the boxes will require water about once a week; in summer almost daily; in autumn not more than once a month; and in winter none. During the summer give liquid manure once a week. Always, if possible, water the boxes in the evening during the summer. A slight sprinkling overhead every evening in summer will be most beneficial. Attention to these points, and to keeping dead leaves and spent flowers picked off, will ensure a successful display.

CHAPTER IX.

VERANDAH GARDENS.

BALCONIES and verandahs are closely associated with each other; indeed, the two are usually regarded as identical. For our purpose there is, however, a fundamental difference. Strictly, a balcony is a perfectly open structure, a platform, projecting from the dwelling. A verandah, on the other hand, has open sides, and a roof, or a roof and closed sides—a kind of greenhouse, in fact. An open verandah with a roof may be classed with a balcony so far as our purpose is concerned, but a closed one requires separate treatment. This type we shall now proceed to deal with.

Verandahs in Relation to Plant Growth.—

Verandahs are not, as a rule, heated; several windows or doors open into them, and they are generally of a cold, draughty order. Hence, many persons find it exceedingly difficult to grow plants for a long period with success. The rich man, who has such a structure, experiences no difficulty, since with the aid of greenhouses elsewhere he is able to maintain a regular supply of flowering and foliage plants all the year round. The ordinary person, who possesses no such advantage, has to rely upon such plants as he can grow without such aid. He soon finds by experience that plants do not succeed well for long, and naturally wonders if he has, or has not, made some mistake in selection or cultivation. The real fact is, the position is too cold and too draughty for the majority of plants, and failure is bound to ensue except in certain instances where plants of the proper type have been selected. This point we will now deal with.

Sunny Verandahs.—Here, assuming that the plants have to be grown all the year round, our advice is—be care-

ful to grow such foliage plants only as the green and variegated aspidistras, Fig-leaf Palm or *Aralia* (*Fatsia japonica*), Japanese Hyacinth (*Ophiopogon jaburan variegatum*), Variegated Spider Plant (*Anthericum variegatum*), New Zealand Pine (*Araucaria excelsa*), Bamboo (*Arundinaria nitida* and *Veitchi*), Japanese Grass (*Eulalia gracillima*), New Zealand Flax (*Phormium tenax variegatum*), and *Yucca aloifolia variegata*. Ferns, of course, such as *Aspidium falcatum* and *proliferum angulare*, *Nephrodium molle*, *Woodwardia radicans*, etc., might also be added to the list.

Then, as regards flowering plants, fuchsias, geraniums, marguerites, lilies, *Agapanthus umbellatus*, *Vallota purpurea*, and hydrangeas might be looked upon as suitable plants for summer blooming; chrysanthemums for autumn; cyclamen, perhaps, in winter; and bulbs, *Azalea mollis*, *Erica lyemalis*, *Cytisus racemosus*, *Coronilla glauca*, *Calla* lilies, and acacias in spring.

Of course, where expense is no object, petunias, heliotropes, balsams, celosias, etc., might be added in summer; salvias, bouvardias, etc., in autumn; primulas, carnations, Roman hyacinths, etc., in winter; Indian azaleas, cinerarias and forced shrubs in spring.

Shady Verandahs.—Here the foliage plants previously mentioned, with the addition of myrtles, and standard bays, and such plants as ferns, with fuchsias, calceolarias, and musk may be regarded as suitable subjects for a shady structure. Really, we should prefer to utilise a shady verandah as a home, and an opportunity for growing native, European, and North American ferns. They love shade, do not mind draughts, and do better than most plants if kept moist in summer.

The Verandah Beautiful.—To make the most of a verandah from an artistic point of view, it is essential that all parts should, as far as possible, be decorated with flowers or plants. Thus, the house wall may be covered with clematises or passion flowers, planted in boxes at the



AN OPEN VERANDAH GARDEN.

The exterior is prettily draped with graceful creepers. Hanging baskets are suspended from the centre of each arch, and the interior decorated with plants in pots.

base; or it may be decorated by ornamental bracket pots filled with ferns or creeping plants. The corners, or sides, may be formed into rockeries with beds of soil containing ferns or pretty foliage plants; the roof covered by elegant creepers, as *Cobæa scandens*, or *Passiflora Constance Elliot*; or decorated by hanging baskets of *Campanula isophylla alba*, *Vinca elegantissima*, *Saxifraga sarmentosa*, or ivy-leaved pelargoniums. By means of pot brackets on the walls and small rock beds or borders on the floor it is possible for any keen enthusiast to make his sunny verandah a place of more than ordinary beauty.

A shady verandah will have to be devoted to foliage plants and ferns, as it is almost an impossibility to expect flowering plants to do really well; they want the precious sunshine to ensure the development of flowers.

We should mention here that the oleander often does well in a sunny verandah. Many would, no doubt, like to grow roses, and we wish we could encourage them to do so, but we cannot honestly recommend the experiment. They may grow for a time, but cold draughts and the dry air are decidedly adverse to their success.

Porches.—These are akin to verandahs. They are cold, draughty spots, and are practically identical in requirements with an open verandah. *Aspidistras* do as well as most plants, and next to these standard bay trees. These remarks apply to the inside; for the outside see chapters on “Balconies” and “Window-Boxes.”

Some Special Hints.—One of the first words of advice we are bound to give is this: If your verandah is covered by opaque glass do not expect to meet with much success in plant growing. All plants, except ferns, delight in the direct light of heaven, and unless they get it they will make attenuated, weakly growth, and assume a sickly appearance. In such a position grow ferns and foliage plants, and eschew flowering ones.

Remember, too, that in closed verandahs plants, like

humankind, require air, but not cold draughts; so give air daily in spring and summer. See also that the foliage is kept free from dust.

In spring and summer, once a week, thoroughly spray, by means of an "Abol" syringe, with tepid water to thoroughly cleanse the foliage. Insects, too, are bound to be troublesome, and a sharp eye should therefore be kept upon them, and, if they do appear, promptly eradicate them. See also to the proper watering of the plants, in accordance with advice conveyed on page 129.

Finally, bear in mind that if you can afford to warm your verandah by means of hot water pipes, so as to maintain a steady, equable temperature, it no longer exists as a verandah, but becomes a greenhouse, in which you may grow a larger variety of plants, and with far greater success.

CHAPTER X.

ROOF GARDENS.

IN preceding pages we have instructed the reader in the art of beautifying the interior of his home, also the exterior, so far as the decoration of the window sills, balconies, and verandahs is concerned, and now we will deal with that most interesting phase of home gardening, the cultivation of plants on the roofs of dwellings, shops, and warehouses. Here we must explain that the latter remarks refer, of course, to flat roofs covered with lead, zinc, or concrete, and not to angled roofs. It is true in country districts one may occasionally see patches of house leek, wallflowers, and stonecrop growing on old sloping tiled roofs, and we have seen pansies flowering on old thatched roofs, but we are not concerned

with country houses, only with those in the town where is no garden space, and where a flat roof under such conditions affords the only opportunity of growing a few flowers to enliven the monotony of town scenery, and yielding pleasure to the lover of flowers.

In London, alone, there are many examples of roof gardens which do infinite credit to their owners. It is astonishing indeed with what great success many manage to grow flowers, plants, and shrubs on elevated roofs exposed to the full force of the wind, scorching summer's sun, and the baneful effects of a smoke-laden atmosphere. It is under such untoward conditions that we find the true gardening instinct fully developed within the man or woman who essays to cultivate a garden on a roof. Unremitting patience, a genuine love of Nature, and a dogged determination to succeed, seem to be the required essentials on the part of those who would be successful as town gardeners. There are probably very many roof gardens of which the public know nothing, because they are hidden from view, and seen only by the owner, his family, and friends. A few, however, have come under our notice, and very interesting they proved to be. In one instance, in Southwark, we believe, the owner cultivates not only flowers, but tomatoes, marrows, cucumbers, etc., with success, on the roof of a public institution. This proves the truth of the old adage, "That where there's a will, there's a way." Well, having said so much by way of introduction, we will now proceed to enlighten the would-be roof gardener how to cultivate flowers, etc., with success under the conditions already mentioned.

Suitable Sites for a Roof Garden.—The most suitable position for a roof garden would be an open flat roof over a projecting shop, or on the top of dwellings, offices, or warehouses, where it is possible to get a fair amount of sunshine in summer. The roof must, of course, be substantially constructed to carry the weight of the soil and plants safely. Concrete or solid floors are best, both on account of



HALL-KEEPER'S GARDEN ON THE ROOF OF SOUTHWARK TOWN HALL.

Here may be seen dahlias and other plants growing most satisfactorily in boxes. The owner has also grown tomatoes and marrows successfully on the same roof.

their strength and durability, and also because their being unaffected by damp from the soil and water applied. Lead and zinc-covered roofs may be utilised in a small way for roof gardens, but are not so suitable as those covered with a solid material.

Method of Cultivating the Plants.—Granted a suitable site is available, the next question is how the plants shall be grown. The usual method is to grow them in tubs or boxes. Unless the space is an ample one, and the roof composed of a solid material, it is not possible to cultivate plants in beds of soil. In any case, there would be a serious difficulty to encounter in the way of getting the requisite mould up to the roof. The idea of flower beds on a roof garden is an impracticable one, and the only other course to adopt is to grow the plants, etc., in pots, tubs, and boxes. The tubs may be paraffin or other casks cut in halves, and with numerous holes pierced through their bottoms to allow superfluous water to escape. The paraffin casks should be partly filled with shavings, and these ignited in order that any oil present on the inside may be burnt out. Needless to say, great care must be exercised in doing this in order to avoid setting fire to the structure. The boxes may consist of old wine or packing cases of any kind, varying from one to two feet in depth. The boxes or tubs should be arranged about the roof to suit the taste and fancy of the owner. For example, a row of boxes may be placed around the margin in which to grow plants to trail over the parapet, especially in the case of "leads" over a projecting shop. The large tubs may be distributed about the centre, and the smaller boxes between. It is possible to so arrange them to form beds with paths between. Wire or latticework arches may be fixed here and there in boxes over the paths, and creepers grown to trail over them. In the corners miniature rockeries may also be formed of stone or burrs, on which to grow alpine plants. It is possible also to have a miniature water-garden, composed of a zinc bath embedded in stones, or virgin cork.

The ingenious gardener might, indeed, construct a very pretty garden by the exercise of a little taste and skill.

Soil.—As it is not an easy matter to frequently change the soil, this should be of good quality in the first instance. A good general compost consists of two parts of loam and one of equal parts of leaf-mould, decayed manure, and coarse silver sand. To every bushel of compost add a quart of bone-meal. Each tub or box should have about two inches of cinders or broken bricks, to serve as drainage, placed in the bottom before adding the soil.

What to Grow. — The next question is the kind of plants, etc., suitable for a roof garden. In a general way we may mention that any of the plants advised for window sills and balconies are equally suitable for a roof garden. But it will, perhaps, be more helpful to the reader if we repeat the latter names with a few additions, so that he may have the information ready to hand to act upon. Few persons, excepting those who have dabbled in roof gardening, are probably aware of the great variety of shrubs, trees, and plants that may be grown under such conditions: We remember inspecting a roof garden in Bishopsgate Street, London, some years ago, where we were surprised to see birch, willow, and lime trees of fair size, to say nothing of privet, aucubas, and euonymuses, flourishing in boxes on a roof. These trees had been growing for years in the same soil, and with no other additional food than ordinary water would supply. It will thus be seen that the roof gardener will not be hampered for want of suitable subjects to grow. We will now deal with the various types of vegetation:

Trees and Shrubs.—Among deciduous trees suitable for growing in large tubs the Birch (*Betulus alba*), Lime (*Tilia europæa*), Sycamore (*Acer pseudo-platanus*), Willows (*Salix alba*, and *babylonica*), Tree of Heaven (*Ailantus glandulosus*), and the Black Poplar (*Populus nigra*) will make sturdy little

trees and flourish for years if planted in the autumn, and kept well watered in summer. Of course, these trees never grow more than a few feet high, but they have a refreshing and pleasing appearance when clothed with green foliage in summer.

Of shrubs the most suitable sorts to grow of the flowering and deciduous type are the Mock Orange (*Philadelphus coronarius*), white; Flowering Currant (*Ribes sanguinea*), red; and the Persian Lilac (*Syringa persica*), lilac. In the way of evergreens *Ancuba japonica*, mottled foliage; *Euonymus japonica*, green foliage; *Euonymus aureus*, yellow foliage; Evergreen Privet (*Ligustrum ovalifolium*), green foliage; *Ovalifolium aureum* (Golden Privet); and the Bay Tree (*Laurus nobilis*), are all suitable. Small standard-trained trees of the latter would be very effective during spring, summer, and early autumn. In winter they would need the protection of a light room. The privets might be planted 6in. apart in boxes a foot wide, and deep around the margin, to form a hedge, if desired. The trees should be grown in tubs 2ft. wide at least, and the other shrubs in tubs or boxes 18in. or so in width and depth."

Climbers. — Suitable permanent climbers for a roof garden would be *Clematis Jackmanii* and *Lady Caroline Nevill*, the former bearing purple, and the latter lavender flowers in summer. The Virginian Creeper, or *Ampelopsis (Vitis quinquefolia)*, and ivies would also do well on arches. Among the annual climbers the Tall Nasturtium, Canary Creeper, and *Cobæa scandens* may be relied upon to make a pretty effect in summer. The seeds of the two first-named may be sown in the boxes in April, or seedlings planted in May. The *Cobæa* should be obtained as a seedling, and planted out in May.

Annuals.—The most appropriate annuals to sow in boxes in April for a cheap summer display are dwarf and tall



ANOTHER VIEW OF THE SOUTHWARK ROOF GARDEN.

Showing what success it is possible to obtain under difficult conditions on an exposed roof.

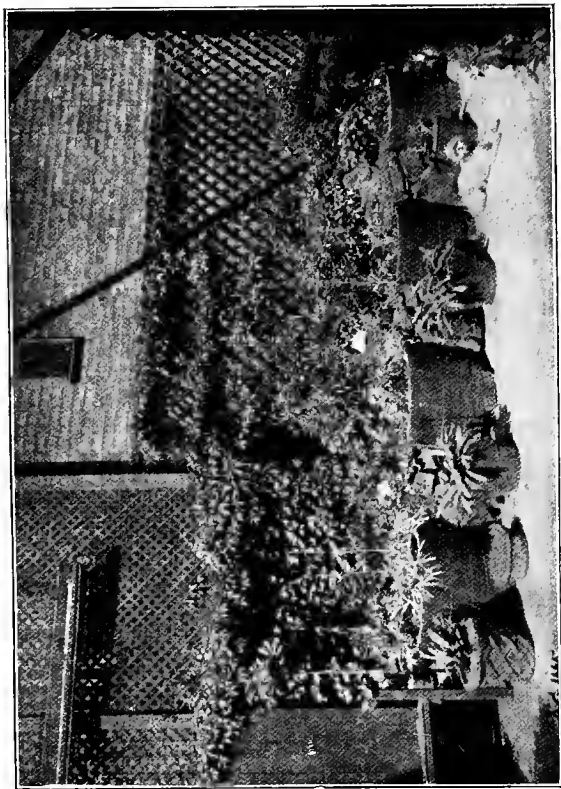
nasturtiums, godetias, Meteor marigolds, *Viscaria cardinalis*, sweet alyssum, candytuft, clarkias, collinsias, eschscholtzias, and Virginian stock. Sweet peas may also be grown with success in tubs or boxes on a roof garden. Sunflowers, too, would do well. Sow the seeds in March. Tender annuals like the French and African marigold, ten-week stock, lobelias, petunias, *Phlox Drummondii*, and *Nicotiana affinis* should be procured as seedlings, and planted out late in May.

Tender Plants.—For a summer display recourse may be had to ivy-leaved pelargoniums, *Tropæolum lobbianum*, single petunias, and lobelias for trailing over the sides of the boxes, and tuberous begonias, zonal, and variegated pelargoniums, fuchsias, marguerites, and ageratums, for filling the centres of the boxes. It might be possible also to grow cactus dahlias in boxes and tubs.

Hardy Plants.—We have seen violas and pansies doing fairly well on London roof gardens. Certainly auriculas, doricums, *Acanthus spinosus*, Early-flowering chrysanthemums, Solomon's Seal, lilies of the valley, wallflowers, London Pride, Creeping Jenny, German irises, sweet williams, carnations, polyanthus, snapdragons, and periwinkles may be relied upon to succeed. Still the best results must be looked for with the annuals and tender plants.

Bulbs.—Any of the bulbs advised for window boxes will thrive on a roof garden. See list on p. 34.

General Remarks.—The trees, shrubs, and plants we have described will suffice for the average requirements of a roof garden. Where expense is a secondary consideration other and choicer plants may be requisitioned for decorating the roof garden. Lilies, for example, may be purchased when in flower, and their pots plunged in ornamental tubs filled with cocoanut-fibre refuse. Hydrangeas, roses, rhododendrons, and cannas in full blossom may be



A ROOF GARDEN AT SOUTH KENSINGTON.

As will be seen by reference to the illustration, the various plants are grown in tubs and pots.

obtained, and treated in a similar way. Graceful foliage plants like bamboos, *Miscanthus sinensis* (*Eulalia gracillima*), a plant with silvery grassy leaves; *Grevillea robusta*, a shrubby plant with fern-like foliage; green and variegated aspidistras; *Fatsia japonica* (the so-called *Aralia*); New Zealand Flax (*Phormium tenax variegatum*), a handsome variegated plant; the Blue Gum (*Eucalyptus globulus*); palms and ferns may be utilised in summer for adding charm and beauty to the roof garden. In this case ornamental tubs or vases filled with fibre refuse should be used for holding the plants, the soil being dispensed with.

Cultural Details.—The vegetation planted out will require careful watering throughout spring and summer. On the evenings of hot days all the plants should be sprayed with water to cleanse and refresh the foliage. In autumn and winter no water will be required, except in the case of evergreen shrubs in small pots, and then about one application will suffice. Plants grown in pots will require watering daily in spring and summer. From May to September either sprinkle some good fertiliser on the surface of the soil at the rate of an ounce per square yard, and lightly scratch it in, once a fortnight; or dissolve half an ounce in each gallon of water applied once a week. Feeding is absolutely necessary on account of the soil naturally being deprived of a good deal of its food elements. The trees may require a little pruning as they increase in age to keep their growths within due bounds. Beyond these precautions there is little more to observe, except the necessity of seeing that the foliage is kept clean.

CHAPTER XI.

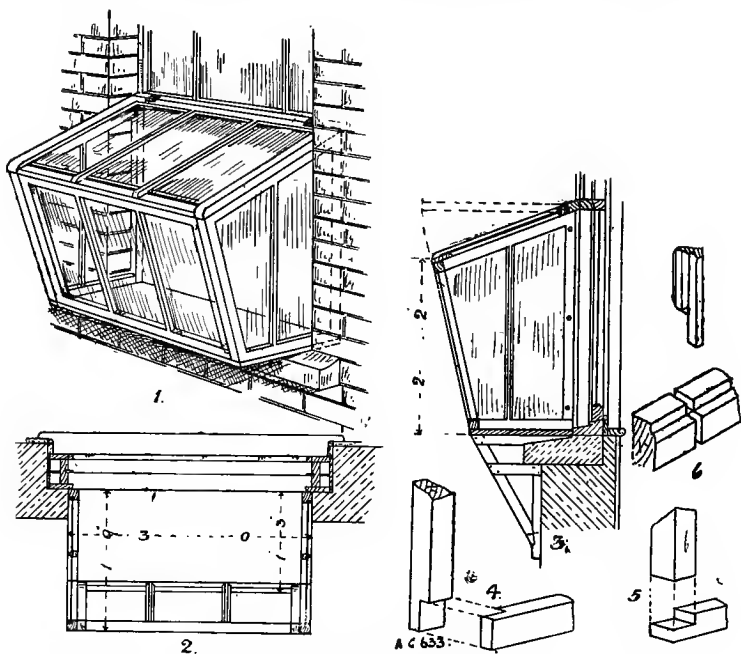
WINDOW CASES.

THE following hints and sketches, showing how to make a window case for growing cacti, orchids, etc., as described on previous pages, were originally contributed by "H. C. R." to "Amateur Gardening."

A very pretty effect can be obtained inside a dwelling room by means of a window case or conservatory such as that illustrated herewith, and where the window of a dining-room or other important apartment of a house looks upon a back-yard, or has an objectionable outlook, a contrivance to hold plants and flowers forms one of the best and most artistic means of making a screen and improving matters. The sketches accompanying illustrate one of the best and simplest forms of case. It is made in five sections, namely, two ends, the front, the top or roof, and the bottom, these being screwed together. The length and height of a case of this description depends upon the width and height of the window. The case should fit exactly between the brickwork of the window and the highest part of the roof be level with the meeting rails of the two sashes, as shown in Figs. 1 and 3, and before the various pieces of wood are cut out and prepared, all necessary measurements should be taken. The length of the case illustrated is 3ft., the height next the window 2ft. 10½in., and the height at the lowest point 2ft. 2in.; whilst the width at the bottom is 1ft. 3in., and at the widest point 1ft. 9in.

Construction.—Good, sound, red or white deal should be used in making the case, the principal members or parts of each section being not less than 1¼in. square, rebated as necessary to receive the glass. The glazing bars should be

1½ in. by ¾ in. All the wood should be planed perfectly smooth, and, if desired, can be obtained ready prepared at a reasonable cost from dealers in horticultural timber. Although, no doubt, tenon joints make the best work, very few amateurs can make them satisfactorily in a reasonable time, and halving will probably be found a more ready method of joining the



A WINDOW-SILL CASE.

Fig. 1. Case complete ; Fig. 2, Plan ; Fig. 3, Section ; Figs. 4, 5, Halving joints ; Fig. 6, Fixing glazing bars.

various members together ; and, if plenty of good nails and screws are used, and the joints neatly made, a strong and well-constructed contrivance will result. Figs. 4 and 5 show the simplest methods of halving the outer timbers together, and



A GRACEFUL FOLIAGE PLANT.

The plant illustrated is *Asparagus plumosus*. It has light, feathery foliage, and is suitable for warm rooms.

Fig. 6 one method of fixing the glazing bars, two nails also being used to make this joint stronger, one driven in from the side and one from underneath. The top of the case should be made to open by being hinged with a pair of 2in. wrought butts to a piece of wood across the back, and have a set-open fastener and stay fixed at the bottom so that air can be admitted as required. The bottom should be formed of $\frac{3}{4}$ in. thick boards screwed to the underside of the case, and have a number of holes bored through so that any superfluous moisture will drain away. When the various sections are completed they should be firmly screwed together, and preparations made for fixing the case to the window, the sheet of glass at each side next the brickwork first being put in, but the remainder of the glass should be left out until the case is fixed. The case is held in position and supported by screwing it at each side to wood wedges driven into the joints of the brickwork, the heads of the various screws being shown in the sectional drawing.

Brackets.—Brackets should also be fixed underneath, and these will vary in shape and construction according to the projection and kind of window sill. One method of forming the brackets is shown in Fig. 3, the back pieces of wood being screwed to wedges driven into the wall under the sill. The woodwork should be coated with red lead priming, and all joints and cracks stopped with putty, and a coat of paint be given, after which the glass may be put in. Twenty-one ounce sheet glass should be used, and be well bedded on putty and fixed in position with sprigs, and, if desired, top puttied and pointed. Any exudation of putty underneath should be neatly trimmed off. When glazed complete, two more coats of paint should be given, any colour desired being used, white probably being the best, as it gathers light.



A 4567.

CLIVIA MINIATA.

An excellent plant for growing in rooms. Flowers scarlet and yellow, appearing in spring. Foliage evergreen.



Part II.—INDOOR PLANTS.

CHAPTER I.

FOLIAGE PLANTS FOR ROOMS.

A WELL-GROWN, ornamental-leaved plant is a decided ornament to a room, and perhaps the most popular of all such plants is the Parlour Palm (*Aspidistra lurida*). Next in order of popularity is the Indiarubber Plant (*Ficus elastica*), the Fig-leaved Palm or Aralia (*Fatsia japonica*), the New Zealand Pine (*Araucaria excelsa*), and various palms. Healthy specimens of either, stood in ornamental vases in the hall, or in the rooms, add materially to the attractiveness and homeliness of the house. Ferns, of course, come under the definition of foliage, but their merits are dealt with elsewhere.

Kinds for Gas-lighted Rooms.—The hardest and best of all foliage plants for such a position are the green and variegated aspidistras. Their tough, leathery foliage withstands heat, cold draughts, and gas extremely well. The variegated form, *Aspidistra lurida variegata*, is the most choice and handsome of the two. A well-grown plant of this is worth quite a shilling a leaf.

Next in order of hardiness and suitability is the Fig-leaf Palm, or so-called "Castor-oil Plant," or "Aralia" (*Fatsia*

japonica). In a young state this is a very handsome plant, but as age creeps on it is apt to lose its lower leaves and become bare at the base. When unsightly it can be stem-rooted, as advised in the chapter on "Propagation."

Then we have the Indiarubber Plant (*Ficus elastica*), another very handsome plant, but subject to become "leggy" with age. There is a pretty variegated form, but it is rather too tender for culture in rooms.

There are also several palms that withstand gas well, these being the "Kentias" (*Howea belmoreana* and *fosteriana*), *Corypha australis*, *Livistonia sinensis*, *Phoenix reclinata* and *rupicola*, and *Archontophoenix elegans*. These are practically the best kinds to grow continually in gas-lighted rooms.

Kinds for Non-Gas-lighted Rooms.—Here there is a wider choice of subjects to select from. Among palms, *Cocos weddelliana*, a very graceful kind; *Chrysalidocarpus lutescens* and *Thrinax elegans* may be mentioned as extremely pretty kinds to grow.

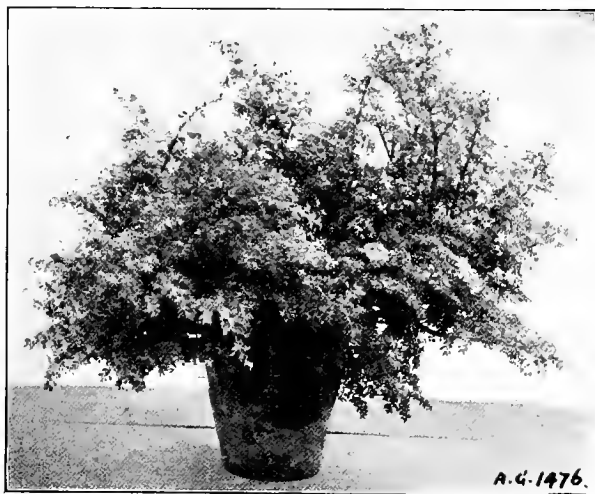
Then *Araucaria excelsa* is a very elegant coniferous tree; the Blue Gum (*Eucalyptus globosa*), an interesting, bluish-leaved plant with fragrant foliage; *Dracaena indivisa* and *Bruanti*, plants with graceful, narrow leaves; *Anthericum variegatum* and *Ophiopogon jaburan variegatum*, plants with variegated narrow foliage; *Cyperus alternifolius* (Umbrella Plant), with narrow, grassy leaves arranged in whorls at the top of slender stems, similar to an open umbrella; and *Grevillea robusta*, a plant with finely-cut foliage. There is also a pretty grass called *Isolepis gracilis*, which makes a neat, elegant little plant for small vases. *Miscanthus (Eulalia) japonicus folius stricatus* has long grassy leaves striped white and green, and is a most graceful room plant. *Asparagus plumosus* and *sprengeri* are both pretty and elegant-leaved plants for a similar position.

The Elephant's Ear Begonia (*Begonia Rex*) has handsome marbled foliage, and this plant does fairly well in rooms.

Of course, those who have hothouses may command other

plants for decorating the room for a brief period, but not for continuous growth in rooms.

An interesting plant to grow on a table near a sunny window in a warm room is the Artillery, or Pistol Plant (*Pilea muscosa*). It belongs to the Nettle family, has finely-cut, green foliage, and insignificant flowers, the buds of which, when they come into contact with moisture, burst and discharge their pollen grains in the form of a cloud. These



ARTILLERY PLANT (*Pilea muscosa*).

An interesting plant to grow in a warm room. Its miniature buds burst when they come in contact with moisture and discharge their pollen like smoke from a gun, hence its common name.

discharges, accompanied by the volumes of smoke-like pollen, have secured for it the name of the Artillery, or Pistol Plant. Apart from the latter fact, the plant has a decidedly pretty fern-like appearance, and is well worthy of culture indoors.

General Treatment.—Strict attention should be paid to the advice given in the chapters on feeding, water-

ing, health, etc., published elsewhere. If these details are carefully followed, all the foregoing plants may be relied upon to thrive for many years, and many of them to grow into handsome specimens. The writer's better half has some of the finest specimens of aspidistras and date palms ever seen grown continuously in rooms, and her success is due entirely to rigidly pursuing the system of watering, feeding, and cleansing the foliage described elsewhere.

In purchasing plants for the first time of any of the foregoing, never buy those that have been exposed on hawkers' barrows. They are bound to become unhealthy before long owing to exposure to the air. The best plan is to buy from a florist who has had the plants properly hardened, and when they can be sent direct from the nursery to the home. Hundreds of palms and plants die yearly through not observing the foregoing precaution.

CHAPTER II.

FLOWERING PLANTS FOR ROOMS.

IN addition to bulbs, roses, and orchids described in other chapters, there are a number of other flowering plants suitable for growing in rooms, a list of which we append at the end of this chapter. Some of these are of shrubby habit, and either evergreen or deciduous, and others are of a herbaceous, or soft-stemmed, habit. It will be well, perhaps, if we classify them here.

Shrubby Plants with Evergreen Foliage.—

These are acacias, *Azalea indica*, *Coronilla glauca*, *Cytisus racemosus* or "*Genista*," *Daphne indica*, *epacris*, *boronias*, *camellias*, *ericas*, and *Nerium oleander* (the *Oleander*).

Shrubby Plants with Deciduous Foliage.—

Azalea mollis and *Deutzia gracilis*.



[Photo: Willoughby Shaw.]

A GOOD WINDOW PLANT—*CAMPANULA ISOPHYLLA ALBA*.

The Drooping White Harebell is an excellent plant for growing as illustrated, or in baskets suspended in a sunny window.

Plants of Perennial Duration.—*Agathæa*, *alonsoa*, *arum*, *auricula*, *begonia*, *calceolaria*, *campanula*, *chry-*

santhemum, cyclamen, dielytra, francoa, fuchsia, heliotrope, hydrangea, lily of the valley, marguerite, mimulus, ophiopogon, pelargonium, Solomon's Seal, spiræa, astilbe, Calla lily, clivias, etc. These may be grown on from year to year, increasing them by cuttings or seeds when they get too old or unsatisfactory.

Plants of Annual Duration.—Cinerarias, lobelias, petunias, primulas, and mignonette. It is true the second, third, and fourth plants mentioned may be grown on for more than a year, but better results are obtained from young plants reared annually, discarding the old ones. Indoor gardeners will find it more satisfactory to buy these plants in flower, as they are not easy to rear from seed in a room.

Treatment of the Shrubby Kinds.—All will require careful watering. Azaleas, epacris, and ericas especially must not be allowed to get in the slightest degree dry at the roots, otherwise their leaves will fall off, and it is next to impossible to get new ones to form unless the plants are placed in a heated greenhouse under the care of a skilled gardener. Ericas and epacris, in fact, will not recover, and must perforce be thrown away if the leaves fall off. Water twice a week from March to October, and once a week afterwards. In summer spray the foliage with water morning and evening. From June to September stand them outdoors in partial shade, placing a piece of slate under each pot.

When the flower-buds of azaleas are beginning to open pick off any young shoots growing immediately under them. After the cytisus, ericas, and epacris have flowered cut away the old flower stems close to the ordinary growths. The azaleas will require no pruning, only the picking off of dead flowers.

The oleander should have those shoots that have borne flowers cut back to three inches from their base after the flowers have faded. Water once a month only in winter. The daphne must not be pruned, but simply allowed to grow as it pleases.

When the *Azalea mollis* sheds its leaves in winter, withhold water and store the plant in a cellar till the end of January; then give a good watering, and place in a warm position. As a rule, this plant does not flower well after the first year. It really requires to be planted out in the garden for a couple of years to make new flower buds, then be lifted and repotted.

The *deutzia* should be pruned moderately close after flowering, be kept indoors till June, then stood outside for the summer and be brought indoors in December.

Treatment of Perennial Plants.—The *agathæa* requires to be moderately watered in winter, have its straggly shoots shortened slightly in February, and then started to grow again. The *alonsoa* should be similarly treated. The *arum* should be potted in autumn, kept dry until growth begins, then be carefully watered all the winter, and be kept dry during the summer, as this is its season of rest. *Auriculas* should be grown outdoors during the summer, brought indoors in autumn, kept barely moist till March, then be topdressed and repotted, and started into growth, after which water freely.

Campanulas require very little water from October to March. Repot then, and start to grow, increasing the water supply as growth proceeds. In summer water freely. After flowering cut off the flower stems. *Chrysanthemums* are really best purchased in flower, as it is difficult for the indoor gardener to find room to grow the plants properly.

Clivia miniata should be kept well watered in spring and summer, and moderately so in autumn and winter. The plant only requires repotting once in every four or five years. Feed with liquid manure when flower trusses form.

Cyclamen make their growth from August to the following April, after which they gradually go to rest. Keep uniformly moist during the growing period. When the leaves begin to fade gradually withhold the water supply, and keep nearly, not quite, dry. Repot early in August. Better to buy new plants yearly.

Dielytra roots should be purchased in autumn, planted in pots, and treated like bulbs till growth begins, then be brought to the light. Water freely till the foliage begins to die, then gradually withhold and store the pots in a cool place till autumn, when repot and treat as before. They will flower the second, although not so well as the first, year.

Spiræas and astilbes require similar treatment. Francoas grow all the year round near a sunny window. Water freely in spring and summer, and moderately in autumn. Repot every spring and feed with manure in summer.

Fuchsias require generous treatment in spring and summer. Water freely, feed liberally then, and spray the foliage morning and evening with water, or place outdoors during a shower. In spring pinch off the points of any straggly shoot to make the plants grow more bushy. In autumn gradually give less water, and in November store the pots in a cellar or other cool place, and give no water. In February prune the plants into shape, repot, and start to grow again.

Heliotropes should be kept slightly dry and warm during the winter, be pruned and repotted in March, then started to grow and be watered freely in summer. Hydrangeas are best purchased in flower as young plants with single stems carrying large heads of flowers. Simply keep moist whilst in flower, after which give the plants to a friend who has a greenhouse, or throw them away.

Lily of the valley roots should be purchased in flower to ensure the best results. It is rather difficult to get these plants to flower nicely if grown prior to the flowering stage. Marguerites are really best obtained in flower and discarded afterwards. After the first year they grow very straggly, and make indifferent plants.

Mimulus, or musk, is easily grown. Grow in shade, give plenty of water in spring and summer and very little afterwards. Repot every spring. The ophiopogon merely requires its roots to be kept moist always, and to be repotted every two or three years. Solomon's Seal should be treated like the dielytra.



STAR-FLOWERED PRIMULA.

Primula stellata is a more free-flowering and less formal type of Chinese primula than the large-flowered section. Also easier to grow.

Zonal pelargoniums like a sunny position. Little water must be given them in autumn and winter, a moderate amount in spring, and plenty in summer. In March straggly plants should have their shoots shortened fairly close, and when new growth begins be repotted. Water carefully at first. If one shoot grows stronger than another nip off its point to make it throw out side shoots. Turn the plant round a little each day. In summer give liquid manure once a week. In autumn give less water and little in winter.

Regal pelargoniums must be kept moderately moist in autumn and winter, and have more water in spring. Grow in a light position, and see that insects do not infest the shoots. After flowering, gradually withhold water, cut the shoots back in July to two inches, and a few weeks later repot and start to grow. Ivy-leaved pelargoniums should be treated like the zonals.

The Calla lily grows during the autumn, winter, and spring, and rests in summer. See, therefore, that it has plenty of moisture whilst growing, and very little when at rest. When the flowers show, feed with liquid manure. Repot in August.

Clivia miniata thrives well in rooms. Its leathery foliage and yellow and red flowers impart to it quite a handsome appearance. In spring and summer water freely; in autumn and winter keep somewhat dry. *Agapanthus umbellatus*, a blue-flowered lily, requires similar treatment.

Treatment of Annual Plants.—These, of course, are to be purchased in flower, as previously advised. Their treatment, therefore, whilst in bloom consists of keeping the soil uniformly moist, the foliage free from dust and insects, and feeding occasionally with weak liquid manure.

As regards the soils, potting, propagation, watering, feeding, and general health of flowering plants, see the various chapters elsewhere on these subjects. Finally, we now submit the following list of plants, with their colours, etc.

FLOWERING PLANTS

Name.	Colour.	Season of Flowering.	Height.
<i>Acacia armata</i> ...	Yellow ...	Spring ...	3 to 4 ft. ...
„ <i>grandis</i> ..	Yellow ...	Spring ...	3 to 4 ft. ...
<i>Agathæa cœlestis</i> ...	Blue and white ...	Summer ...	1 ft. ...
<i>Alonsoa incisifolia</i> ...	Scarlet ...	Summer ...	18 in. ...
<i>Arum sanctum</i> ...	Green and pur. ...	May ...	15 in. ...
<i>Astilbe japonica</i> ...	White ...	Spring ...	18 in. to 2 ft. ...
<i>Auricula</i> ...	Various ...	Spring ...	6 in. ...
<i>Azalea</i> ...	Various ...	Spring ...	3 ft. ...
<i>Begonia</i> ...	Various ...	Summer ...	8 in. ...
<i>Calceolaria shrubby</i> ...	Yellow, brown ...	Summer ...	1 ft. ...
<i>Campanula isophylla</i> ...	Blue ...	Summer ...	6 in. ...
„ „ <i>alba</i> ...	White ...	Summer ...	6 in. ...
„ „ <i>balchiniana</i> ...	Variegated ...	Summer ...	6 in. ...
<i>Chrysanthemum</i> ...	Various ...	Autumn ...	3 to 4 ft. ...
<i>Cineraria</i> ...	Various ...	Spring ...	12 to 18 in. ...
<i>Coronilla glauca</i> ...	Yellow ...	Spring ...	2 to 3 ft. ...
<i>Cyclamen persicum</i> ...	Various ...	Winter ...	6 to 8 in. ...
<i>Cytisus racemosus</i> ...	Yellow ...	Spring ...	2 to 3 ft. ...
<i>Daphne odora</i> ...	Flesh ...	Spring ...	2 ft. ...
<i>Deutzia gracilis</i> ...	White ...	Spring ...	2 to 3 ft. ...
<i>Dielytra spectabilis</i> ...	Pink ...	Spring ...	18 in. to 2 ft. ...
<i>Diplacus glutinosus</i> ...	Salmon-red ...	Summer ...	2 to 3 ft. ...
<i>Epacris hyacinthiflora</i> ...	Pink, etc. ...	Spring ...	2 ft. ...
<i>Erica gracilis</i> ...	Red, purple ...	Winter ...	18 in. ...
„ <i>hyemalis</i> ...	Pink ...	Winter ...	2 ft. ...
<i>Francoa ramosa</i> ...	White ...	Summer ...	18 in. ...
<i>Fuchsia</i> ...	Various ...	Summer ...	2 to 4 ft. ...
<i>Heliotropium</i> ...	Blue ...	Summer ...	18 in. ...
<i>Hydrangea</i> ...	White, blue ...	Summer ...	1 to 2 ft. ...
<i>Lily of the Valley</i> ...	White ...	Spring ...	6 in. ...
<i>Lobelia erinus</i> ...	Blue or white ...	Summer ...	6 in. ...
<i>Marguerite</i> ...	White, yellow. ...	Summer ...	1 to 2 ft. ...
<i>Mimulus Harrisoni</i> ...	Yellow ...	Summer ...	6 in. ...
„ <i>moschatus</i> ...	Yellow ...	Summer ...	6 in. ...
<i>Nerium oleander</i> ...	Pink, white ...	Summer ...	3 to 6 ft. ...
<i>Ophiopogon jaburan</i> ...	Blue ...	Summer ...	1 ft. ...
<i>Pelargonium</i> ...	Various ...	Summer ...	1 to 2 ft. ...
<i>Petunia</i> ...	Purple, white ...	Summer ...	1 ft. ...
<i>Primula Forbesii</i> ...	Pink ...	Spring ...	6 in. ...
„ <i>obconica</i> ...	Pink, rose ...	Winter ...	6 in. ...
„ <i>sinensis</i> ...	Various ...	Winter ...	6 in. ...
„ <i>kewensis</i> ...	Yellow ...	Spring ...	6 in. ...
<i>Richardia Africana</i> ...	White ...	Spring ...	2 ft. ...
<i>Streptocarpus hybrida</i> ...	Various ...	Summer ...	6 in. ...
<i>Spiræa astilboides</i> ...	White ...	Spring ...	18 in. to 2 ft. ...

FOR ROOMS.

How Propagated.	When.	Time to Re-Pot.	Popular Name.
Cuttings ...	Spring ...	March ..	Kangaroo Thorn.
Cuttings ...	Spring ...	March ...	
Cuttings ...	Spring ...	March ...	Blue Marguerite.
Cuttings ...	August ...	March ...	Mask Flower.
Tubers ...	Autumn ...	Autumn ...	Black Lily.
Division ...	Autumn ...	November ...	False Goat's Beard.
Seed, division	Spring ...	March ...	
Cuttings ...	Spring ...	March ...	Indian Azalea.
Seed ...	Spring ..	March ...	Tuberous Begonia.
Cuttings ...	Autumn ...	March ...	Slipper-wort.
Cuttings ...	Spring ...	March ...	Drooping Harebell.
Cuttings ...	Spring ...	March ...	
Cuttings ..	Spring ...	March ...	
Cuttings ...	Jan., Feb. .	March, April	
Seed ...	July ...		
Cuttings ...	Spring ...	March ...	Shrubby Crown Vetch.
Seed ...	Oct. or Jan.	August ...	Persian Cyclamen.
Cuttings ...	Spring ..	March ...	Evergreen Laburnum.
Cuttings ...	Summer ...	March ...	Indian Daphne.
Cuttings ...	May ...	March ...	Japanese Snow Flower.
Division ...	October ...	October ...	Bleeding Heart.
Cuttings ...	Summer ...	March ...	Shrubby Mimulus.
Cuttings ...	Spring ...	March ...	Australian Heath.
Cuttings ...	Spring ...	March ...	Winter Heath.
Cuttings ...	Spring ...	March ...	Winter Heath.
Seed, cut. ...	Spring ...	March ...	Maiden's Wreath.
Cuttings ...	Spring ...	March ...	
Cuttings ...	Spring ...	March ...	Heliotrope.
Cuttings ...	April or Aug.	March ...	
Offsets ...	Autumn ...	November ...	
Seed ...	Spring ...		
Cuttings ...	Sp. or autmn.	March ...	
Cuttings ...	Spring ...	March ...	Harrison's Musk.
Cuttings ...	Spring ...	March ...	Musk.
Cuttings ...	Summer ...	March ...	Oleander.
Division ...	Spring ...	March ...	
Cuttings ...	Sp. or autmn.	March ...	Zonal Geranium.
Seed, cut. ...	Spring ...	March ...	
Seed ...	Spring ...		
Seed ...	Spring ...		
Seed ...	Spring ...		Chinese Primula.
Seed ...	Spring ...		
Division ...	August ...	August ...	Calla or Arum Lily.
Seed ...	Spring ...		
Division ...	Autumn ...	November ...	



[Photo by Chas. Jones.]

THE "GENISTA"—*CYTISUS RACEMOSUS*.

An evergreen shrub bearing yellow, fragrant blossoms in spring. An excellent room plant.

CHAPTER III.

BULBS FOR ROOMS.

BULBS are of comparatively easy cultivation in pots, fibre, or water, and at the same time showy flowers for brightening the home in late winter and spring. These remarks apply especially to what are called Dutch bulbs—hyacinths, tulips, crocuses, snowdrops, and narcissi. There are, however, other bulbous plants which may be grown indoors for flowering at other seasons of the year, as lilies, vallotas, hippeastrums, etc., and the object of this chapter is to deal with all types of bulbs suitable for indoor growth.

Bulbs in Pots.—The kinds suitable for this purpose are hyacinths, tulips, narcissi, crocuses, scillas, snowdrops, muscaris, chionodoxas, irises, alliums, amaryllis, ornithogalums, hippeastrums, liliiums, gloxinias, and vallotas.

The snowdrops, crocuses, scillas, muscaris, chionodoxas, and irises should be grown in three-inch pots, about five bulbs in each. Hyacinths, if large bulbs, are best grown singly in six-inch pots; otherwise grow them, also tulips and narcissi, three in a six-inch pot. Ornithogalums and alliums may be grown five in a six-inch pot; vallotas and amaryllis or hippeastrums, one in a six-inch pot; one lily in a six-inch or three in an eight-inch pot. The Onion Plant (*Ornithogalum longibracteatum*) should also be grown one in a six-inch pot.

The method of potting bulbs is fully described in the chapter on "Potting," which see. After potting, give no water, but immediately transfer the pots to a cool, dark cupboard, cellar, outhouse, or any place where the air is cool. The pots should, if possible, be covered with cocoanut-

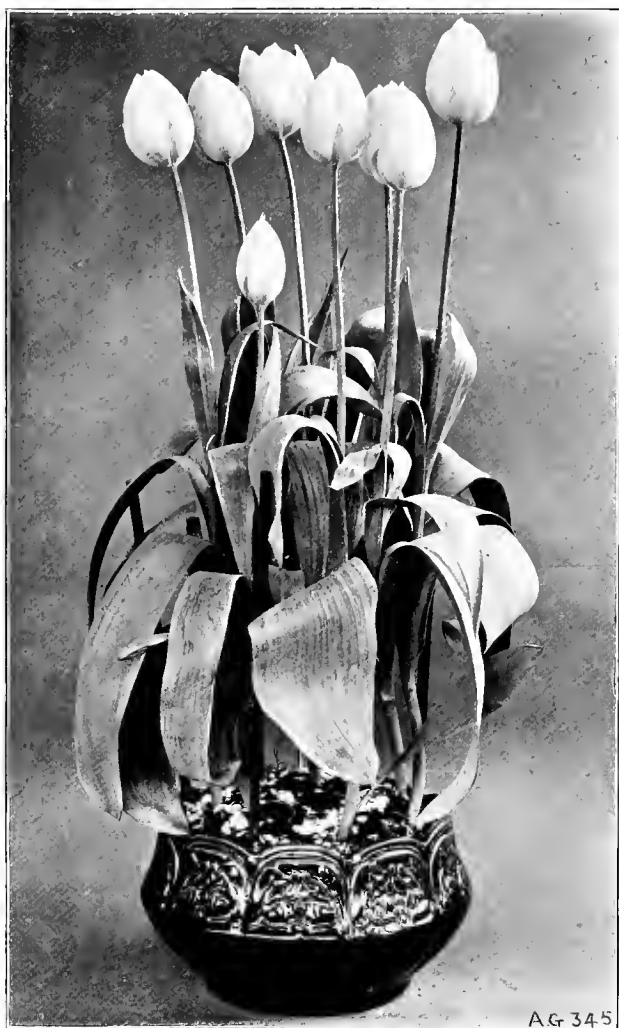
fibre refuse or cinder ashes to keep them cool, moist, and dark. Never place newly-potted bulbs in a dry cupboard or expose them to the light.

In about six weeks after potting, snowdrops, crocuses, chionodoxas, hyacinths, tulips, and narcissi will begin to push their growths through the soil. Remove the covering and lift out any that have made an inch of growth, and leave those not so far advanced, re-covering them for another fortnight—in fact, till growth begins. Those removed bring to partial, not full, light, and let them remain until their blanched growths turn green; then place close to the window. Water moderately at first, and when growth is active give a larger supply. Examine those left under the covering at intervals of a week or so, and gradually bring them forward to the light. The lilies will start to grow the last of all.

When flower spikes begin to form place a neat stake to each and give weak liquid manure once a week till the flowers are fully open, then cease. Manure discolours the delicate tints of the flowers if applied after they are fully blown. Lilies are liable to be infested with aphides, so keep an eye on the young shoots.

After flowering, the hyacinths, tulips, narcissi, crocuses, snowdrops and scillas should be placed on one side to finish their growth. When the foliage dies, withhold water, and plant the bulbs out in the garden. They would not flower well a second year in pots. Lilies, after flowering, should gradually have water withheld from them, and be kept quite dry all the winter until new growth begins. The *vallota* must be kept moist all the winter and spring, and nearly dry in summer, commencing to give water again when the flower-stem shows.

Amaryllises make their growth in winter and spring, and require to be kept dry in summer; and *hippeastrums* grow in spring and summer, and must be kept dry in autumn and winter. The *chionodoxas*, *irises* and *alliums* usually go to rest after flowering, and require to be kept cool and dry



A BOWL OF TULIPS.

The tulips are grown in moss fibre as described on p. 75.

from the time they lose their foliage until new growth begins.

Florists make up very dainty pots of tulips and ferns in mixture in spring. The bulbs for this purpose are grown in boxes, lifted when in flower, and planted with seedling ferns in pots; they are thus only temporarily associated with each other.

Gloxinias are often grown with success in windows. Grow in a sunny window. Keep the roots moist in spring and summer, gradually withhold water after flowering, and keep dry till new growth commences early in the year.

Bulbs in Fibre.—A still more interesting way of growing bulbs for room decoration is in bowls or jars filled with a specially-prepared fibre compost. "Doulton" and Japanese ware are specially suitable bowls for the purpose. Crocuses to the number of four or five bulbs can be grown in a 2½ in. to 4 in. size; one bulb of hyacinth, tulip, or narcissus in a five-inch size; three or more in larger sizes.

The compost should consist of two parts of cocoanut-fibre refuse and one part each of fine seashell and charcoal, with a handful of artificial manure to every peck of the mixture. Several of our bulb specialists supply the compost ready mixed.

In September or early October fill the bowls to within an inch of their rims with the compost, and press it down moderately firm. Next press the bulbs into the fibre so that their points just show through; then transfer the bowls to a cellar or dark, cool place, and cover them with fibre refuse. No water must be given. When the shoots are an inch long remove them from the covering, bring to partial light for a week, then place in full light, and apply enough tepid rain-water once a week to just keep the fibre moist. Turn the bowls round a little daily, and support the flower stems with neat sticks. No drainage is required in the bowls.

After flowering, plant the bulbs in the garden, as they are of no further use for fibre culture. Hyacinths, tulips, narcissi, snowdrops, crocuses, chionodoxas, scillas, muscaris,

and Roman hyacinths, are specially suited for this mode of culture.

Bulbs in Moss.—A novel way of growing hyacinths, etc.: Procure fresh moss from a hedge bank, shape it into a ball; then arrange bulbs of hyacinths around it, cover them with moss, and secure in position by winding twine round the ball as the work proceeds. When finished, run a hooked wire through the ball, dip the latter in water, and hang up in a dark cellar till growth begins, when suspend in a window. Water after growth commences once a week. Tulips, crocuses, and snowdrops may be grown in a similar way.

Bulbs in Water.—This is another delightful way of growing bulbs indoors; indeed, it is so simple that a child might do it. Procure the special bulb glasses sold for the purpose by bulb and china dealers. They are made in various colours, but plain crystal is the best. Opaque vases are also sold for a similar purpose.

The next, and most important, item is to procure good bulbs. In each glass or vase put a lump of charcoal to keep the water sweet, and then fill up nearly to the base of the neck, or expanding top or cup, with rain water. Place the bulb in the cup, and add water so that it nearly, but not quite, touches the base of the bulb. After this is done remove the glasses to a cool, dark cellar or cupboard, and let them remain until plenty of roots are formed; then remove to partial light for a week, and, finally, to a light position. If the water has evaporated replenish the supply. In the event of the flower stem requiring support, get a stout piece of wire, thrust the lower end into the bulb, and secure the stem to the upper part.

After flowering, plant the bulbs in the garden, as they are of no further use for glass culture.

Bulbs in Bowls.—The Chinese Sacred Lily (*Narcissus tazetta*) is usually grown as follows. Procure a Japanese

bowl and place a layer of pebbles in the bottom, then add enough rain water to nearly, but not quite, cover them. Place the bulbs on top, pack a few pebbles between them, and remove the bowls to a cool, dark place till growth has begun and roots formed, when remove to the light. Replenish the water from time to time as it evaporates.



BULBS PLACED IN GLASSES.

The bulbs are shown placed in the neck or cup of the usual type of glass used for the purpose. Note the names are pasted on the outsides.

The bulbs are only suitable for planting out in the garden after flowering. This bulb should not be grown in rooms where gas is burnt, as the fumes often injure the buds and prevent them developing.

BULBS SUITABLE FOR

Name.	Colour.	Flowering Period.	Height.
<i>Allium Neapolitanum</i> ...	White ...	May ...	1 ft. ...
<i>Amaryllis belladonna</i> ...	Rose... ...	August ...	1 ft. ...
<i>Babiana plicata</i> ...	Violet, blue ...	May ...	6 in. ...
„ „ ...	White and blue ...	May ...	6 in. ...
<i>Bulbocodium vernum</i> ...	Rosy purple ...	February ...	6 in. ...
<i>Calochortus lilacinus</i> ...	Lilac and purple ...	July ...	9 in. ...
„ <i>venustus</i> ...	White ...	July ...	1 ft. ...
<i>Chionodoxa luciliae</i> ...	Blue and white ...	March ...	6 in. ...
„ <i>sardensis</i> ...	Blue... ...	March ...	6 in. ...
<i>Crocus</i> ...	Blue, yel. and white ...	March ...	6 in. ...
<i>Galanthus nivalis</i> ...	White ...	February ...	6 in. ...
„ <i>Fosteri</i> ...	White ...	February ...	6 in. ...
<i>Hæmanthus coccineus</i> ...	Scarlet ...	February ...	1 ft. ..
<i>Hyacinth</i> ...	Various ...	Feb.toApril	1 ft. ...
„ <i>Roman</i>	White ...	January ...	9 in. ...
<i>Iris histrioides</i> ...	Blue, yellow, violet ...	February ...	6 in. ...
„ <i>reticulata</i> ...	Blue, yellow ...	February ...	6 in. ...
<i>Lachenalia tricolor</i> ...	Red, green, etc. ...	Spring ...	6 in. ...
<i>Lilium auratum</i> ...	White, crimson ...	August ...	4 ft. ...
„ <i>longiflorum</i> ...	White ...	Summer ...	3 ft. ...
„ „ <i>Harrisii</i> ...	White ...	Spring ...	3 ft. ...
„ <i>speciosum</i> ...	Red, white, etc. ...	August ...	4 ft. ...
<i>Muscari botryoides</i> ...	Blue... ...	April... ..	6 in. ...
„ „ <i>alba</i>	White ...	April... ..	6 in. ...
<i>Narcissi</i> ...	Yellow, white ...	Spring ..	1 ft. ...
<i>Nerine sarniensis</i> ...	Salmon ...	September .	1 ft. ...
<i>Ornithogalum Arabicum</i> .	White ...	June ...	18 in....
„ <i>longi-bracteatum</i> ...	White ...	June ...	18 in....
<i>Oxalis cernua</i> ...	Yellow ...	Spring ...	6 in. ...
„ „ <i>fl. p.</i> ...	Double ...	Spring ...	6 in. ...
„ <i>floribunda</i> ...	Rose... ...	Spring ...	6 in. ...
<i>Scilla sibirica</i> ...	Blue ...	March ...	6 in. ...
<i>Sprekelia formosissima</i> ...	Crimson ...	Summer ...	2 ft. ...
<i>Tulip</i> ...	Various ...	Spring ...	1 ft. ...
<i>Vallota purpurea</i>	Red ...	August ...	1 ft. ...

CULTURE IN ROOMS.

How to Grow.	When to Plant.	Popular Name.
Pots	Sept. or Oct. ...	Daffodil Garlic.
Pots	August	Belladonna Lily.
Pots	September ...	Baboon Root.
Pots	September ...	Baboon Root.
Pots	September ...	Spring Meadow Saffron.
Pots	November ...	Mariposa Lily.
Pots	November ...	Mariposa Lily.
Pots or fibre ...	Sept. to Nov. ...	Glory of the Snow.
Pots or fibre ...	Sept. to Nov. ...	Glory of the Snow.
Pots, fibre or water	Sept. to Nov. ...	Crocus.
Pots or fibre ...	Sept. or Oct. ...	Snowdrop.
Pots	Sept. or Oct. ...	Snowdrop.
Pots	Aug. to Nov. ...	Blood Flower.
Pots, fibre or water	Oct. and Nov. ...	Hyacinth.
Pots, fibre or water	Aug. to Nov. ..	Roman Hyacinth.
Pots	Sept. or Oct. ...	Bulbous Iris.
Pots	Sept. or Oct. ...	Bulbous Iris.
Pots or moss ...	Aug. or Sept. ...	Cape Cowslip.
Pots	Nov. to Feb. ...	Japanese Lily.
Pots	Sept. to Nov. ...	Trumpet Lily.
Pots	Sept. to Nov. ...	Bermuda or Easter Lily.
Pots	Nov. to Feb. ...	Spotted Lily.
Pots or fibre ...	Sept. to Nov. ...	Grape Hyacinth.
Pots or fibre ...	Sept. to Nov. ...	Grape Hyacinth.
Pots, fibre or water	Sept. to Nov. ...	Daffodil.
Pots	Aug. to Oct. ...	Guernsey Lily.
Pots	Sept. to Nov. ...	Star of Bethlehem.
Pots	Sept. to Nov. ...	Onion Plant.
Pots	Jan. and Feb. .	Bermuda Buttercup.
Pots	Jan. and Feb. ...	Bermuda Buttercup.
Pots	Jan. and Feb. ...	Rosy Wood Sorrel.
Pots or fibre ...	Sept. to Nov. ...	Squill.
Pots	Feb. to March. ...	Jacobean Lily.
Pots, fibre or water	Sept. to Nov. ...	Tulip.
Pots	August	Scarboro' Lily.



JAPANESE LILY (*Lilium auratum*).

One of the showiest and best of the lilies for indoor gardens. Should, however, not be grown indoors by those who object to strong perfumes.

CHAPTER IV.

FERNS IN ROOMS.

FERNS are very popular with indoor gardeners. Their elegant and graceful fronds possess a charm and beauty unsurpassed by any other class of indoor plants. Whether grown in miniature jars or bowls, in large pots, in ornamental vases, in hanging baskets in the window, or in cases they make very beautiful and interesting subjects for the decoration of rooms.

Culture in Rooms.—Ferns are indispensable room-plants, and, if suitable sorts are chosen, give very little trouble. They should not be purchased in winter or early spring, but preferably in summer, when the temperature everywhere is much the same. When the weather is cold they are half killed by the exposure thereto before purchase, especially from hawkers. The Blue-green Polypody (*Polypodium aureum*) and the broad white and green *Pteris argyrea* should not be purchased in the autumn, as they are too tender for room-culture in winter. The Maidenhair also requires careful winter treatment, and it will be best not to make it one's first purchase.

The pterises or ribbon ferns are the best to commence with, and will stand much rough treatment. A shady or semi-shady window is necessary; also a liberal water supply. With the ferns in tiny pots, so often seen, this is best given by immersion for several minutes. Repotting should be done from April to July—it is not needed annually—say once in two years, until six-inch pots are reached, when they will go three or four years. An occasional overhead watering is very beneficial. Soot water may be given healthy plants not repotted the same season, from April to August.

A good compost is loam two parts, leaf-mould or peat two parts, and sand one part. Pot firmly. Propagation,

other than division when repotting, is not advisable in room-culture. Yellowness of the fronds is the result of too much sunlight or exhaustion of the soil. Shade in the former and repot in the latter case. Brown patches and tips are caused in the same way as with palms. Immunity from draughts is essential in fern culture.

Suitable Kinds for Rooms.—The following sorts are suitable for growing in pots or vases in rooms where gas is consumed: *Asplenium bulbiferum* and *Colensoi*, *Davallia canariensis* (Hare's-foot Fern), *Aspidium falcatum*, *Nephrodium molle*, *Nephrolepis exaltata* (Ladder Fern), *Aspidium angulare* Bayliæ, *angulare proliferum densum* and *munitum*, *Pteris cretica*, *cretica magnifica*, *serrulata* (Ribbon Fern), *serrulata cristata*, *serrulata major*, *cristata*, and *tremula*, *Scolopendrium vulgare crispum*, *vulgare laceratum*, and *vulgare grandicep*. The Elk's Horn Fern (*Platycerium alci-corne*) is also a most interesting fern to grow on a block of wood. *Adiantum cuneatum* (Maidenhair), *decorum*, *Pacottii*, *Williamsii*, and *Phlebodium aureum* (Golden Polypody) may likewise be grown in rooms not lighted by gas.

Ferns in Porous Jars.—An interesting and uncommon way of growing ferns indoors is in porous jars or pots. Porous pots can be obtained from dealers in electrical appliances, or a soft, saturated, badly-burnt flower pot will answer. In the latter case cork up the drainage hole. The fern is then pulled to pieces and bound round the outside of the pot, together with lumps of peat, by means of wire, and the whole well soaked in tepid water. The porous pot in the centre should be kept filled with water, the percolation of which will keep the soil and fern moist. Creeping stemmed species are best suited for this manner of culture, such as the ordinary Maidenhair (*Adiantum cuneatum*), the British Maidenhair (*Adiantum capillus veneris* and its varieties), *A. assimile*, Squirrel's-foot Fern (*Davallia bullata*), etc. Of course, a shady position is necessary, and an established plant would also do well in a north or shady window.

Fern Balls.—Some years ago a curious method of growing ferns was introduced from Japan. A foundation of moss or peat fibre is encased with rhizomes of the Squirrel's-foot Fern (*Davallia bullata*), these being secured in position by wire. Besides the familiar ball, other fanciful foundations



ADIANTUM PACOTTII.

A pretty fern for a non-gas-lighted room. Belongs to the Maidenhair section of indoor ferns.

are made in the shape of monkeys, birds, harps, etc., and the rhizomes similarly secured to these. The ball method is, however, the most satisfactory one. They may be pur-

chased of any florist. Amateurs would probably experience a difficulty in procuring the rhizomes for making up the balls themselves.

When purchased, fern balls are ready for hanging up in a shady window. They should be soaked on arrival for two hours in tepid rain water, and then drained before hanging up; a thorough soaking similarly for ten minutes every alternate morning will be sufficient after this, unless the weather should be very hot and dry, when soak daily. If hung in a window with a sunny aspect it is desirable to soak the balls daily in summer. Shade of some kind should also be applied to the roots.

When grown in a room it is easy to soak the ball in a bucket, after which the water can be poured away, and the plant allowed to drain for half an hour before hanging up. The plants make better growth the second season than the first. If the shape is to be preserved the rhizomes must be pegged with bent wire or hair-pins to the ball as they grow. In the autumn the fronds turn yellow and fall, when less water should be given; during winter the roots need only to be kept from getting dust-dry, and may be stored in any cool frost-proof position.

Ferns under Glass Shades.—A beautiful fern, or group of ferns, growing in a room, is a refreshing object for the eye, especially in a great city, remarks a writer in "Amateur Gardening." For such situations the Wardian case is an absolutely artistic delight, whereas in a country house its artificiality is displeasing, for the ferns would thrive as well without it. There is no need to possess a Wardian case, though, in order to be able to grow perfect specimens of ferns in the smallest room of the smokiest town—a sufficiently tall bell-glass will answer the purpose just as well, if stood over a pot plant or plants; the edges of the glass must go into a saucer or dish of water, but the pots must not stand in water, so a few china tiles of pretty colour should be laid over the saucer for them to rest on. It may be thought that even new red earthenware pots are

unsightly ; there is no reason, however, why they should not be covered, either by having pieces of virgin cork fastened



A MINIATURE FERNERY.

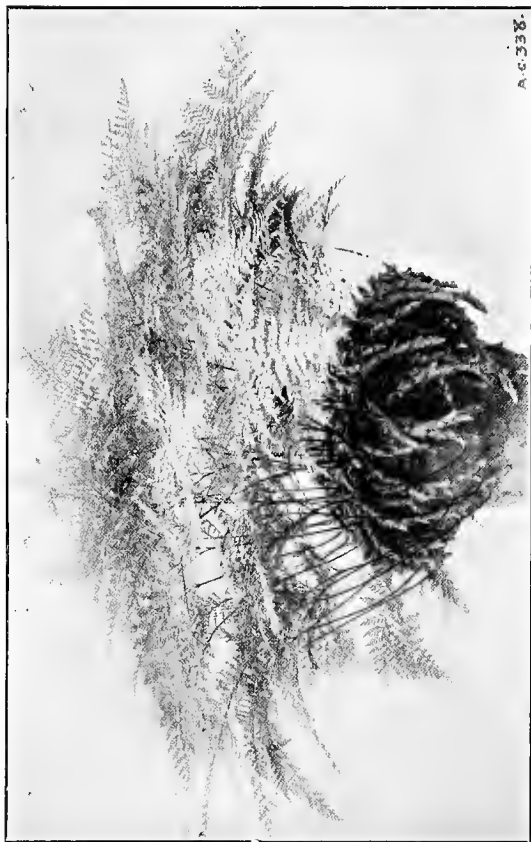
A simple way of growing ferns in a room. In the present case an ordinary glass jar is inverted over a few seedlings of *Asplenium bulbiferum* planted in a shallow saucer. It is only necessary to occasionally soak the saucer in water to keep the ferns in good health for a long period.

together round them, or by dried and washed moss tied round by invisible green thread. The glass shade must be

removed three times a week for a few hours to give air, and can then be washed and polished; the brighter the glass the better will be the appearance of the ferns. This air-giving is best done very early in the morning, that being the time when the atmosphere is least smoky—the next best time is night. Ferns can be planted or potted in July for growing under glass in our rooms. Maidenhairs are all suitable, but *Adiantum setulosum* gives an especially pretty effect; *Adiantum capillus-veneris* is the true Maidenhair. *Adiantum cuneatum*, *A. assimile*, *A. formosum*, *A. fulvum*, and *A. tinctum*, are excellent. *Davallia canariensis* (the Hare's-foot Fern) is a popular one. *Woodsia ilvensis* is a beautiful fern, and *Woodsia hyperborea* can also be highly recommended. *Aspidium proliferum* is sure to thrive. In all probability *Selaginella lævigata* will succeed except in a cold locality, if protection from frosts be given by covering the case well, or removing it from the window at night. This blue moss is one of the loveliest of all associates for ferns, so should assuredly be tried. *Selaginella denticulata* is well known, and very useful. *Adiantum sulphureum* is a golden fern that is not difficult to manage; *Cheilanthes fragrans*, orange-tinted, will also consent to live without stove heat. *Scolopendrium vulgare bimarginata cordatum*, *S. v. ramomarginatum*, and *S. v. Wardi* are all good.

Ferns in Wardian Cases.—This is a most interesting way of growing choice ferns that cannot be successfully grown in the dry air of rooms. A case may be purchased complete, or a more commendatory method, where a skilful and industrious pair of hands exist, is to build one for one's self. We have seen some very elegant and artistic creations made in spare hours, but the success of the plants does not depend upon the beauty of the case; on the contrary, an elaborate and heavy design may be deterrent to the plants' welfare, and often a simple structure is best.

Whether designed and constructed at home or purchased, fern cases should have as light a framework as is consistent with strength and durability; the panes of glass should be



A.C.338.

[Photo by F. Taylor.

THE HARE'S-FOOT FERN (*Davallia canariense*).

A good fern for culture in rooms. The creeping stems grow over the surface of the soil and the side of the pot, and the elegant fronds spring from these.

clear, and not more numerous than necessary. Ample provision must be accorded for admission of air and ventilation, access to all parts of the interior when planted should be easy, and free and perfect drainage should be provided. If the top can be tilted so much the better, and in the event of a small case the whole glass structure should be able to be lifted off.

Cases may be made to be heated artificially or can be unheated. The former is generally accomplished by a reservoir surrounding the trough that contains the soil, that is either filled periodically with hot water or contains water that is warmed by a lamp or gas jet beneath it.

Placing the soil in them should be carefully done. The trough to hold it is usually from six to eight inches deep, and into this first place from two to three inches of either broken crock or cinders as large as hazel nuts. On this place a layer of rough fibry peat about an inch deep, and then fill to the rim with a compost that is made up as follows: Three parts turfy peat, one part fibrous loam, one of coarse Bedfordshire silver sand, and one of broken charcoal and small crocks. The peat and loam should be broken to about the size of walnuts, the whole well mixed together and used rough, not sifted. It is a landable practice to scald the whole with boiling water, thus destroying insect life and weed seeds that might be troublesome after the plants are established. When this is done the case may be planted as soon as the soil is cool.

Suitable Ferns for Wardian Cases.—Out of the large number of ferns that are suitable, those mentioned here are, perhaps, among the easiest to manage, and those likely to succeed well. For an unheated case: *Adiantum cuneatum*, *Asplenium attenuatum*, *A. viviparum*, *Blechnum occidentale*, *Doodia aspera*, *D. caudata*, *Lomaria blechnoides*, *Nipholobolus lingua*, *Pteris cretica albo-lineata*, *Todea superba*, and *Onychium japonicum*. The temperature of the case containing these ferns should not fall below 40 deg.

A dozen ferns suitable for a heated case might consist of



MAIDENHAIR FERN (*ADIANTUM CUNEATUM*).

A popular fern for room culture or for growing in Wardian cases.

the following: *Adiantum tenerum*, *Anemia adantifolia*, *Asplenium alatum*, *Asplenium Belangeri*, *Blechnum lanceolatum*, *Asplenium zeylanicum*, *Hemionitis cordifolia*, *Pteris denticulata*, *Lomaria attenuata*, *Polypodium percussum*, *Asplenium Colensoi*, *Adiantum setulosum*, and *Doodia amœus*. The minimum temperature that should be allowed for these is 55 deg. Most of the selaginellas also will succeed in either case, but preference should be given to the heated one.

Management of Fern Cases.—In the management of fern cases more than half the failures might be traced to watering errors. It is a mistake to assume that you cannot give fern cases too much water; this is indeed the case, and if the excess becomes stagnant the destruction is more certain. If the soil has been scalded before planting, and is thoroughly moist, little or no water may be required for some weeks; at any rate, so long as the soil is nicely moist do not water; merely slightly syringe or spray the foliage of the plants carefully occasionally, and enough atmospheric moisture will be maintained.

Ventilation should take place every morning for a few minutes, either by tilting the top or by any other means that may have been devised, and at the same time condensed moisture should be wiped from the inside of the glass with a cloth. Spring is an excellent season either for planting or replanting fern cases.



CHAPTER V.

FRUITING PLANTS FOR ROOMS.

THE Winter Cherry and Orange are two familiar plants met with in rooms, and both are of sufficient importance to be dealt with in a chapter by themselves.

The Winter Cherry, or Star Capsicum.—This plant, botanically called *Solanum capsicastrum*, is an ever-green shrub, bearing orange or scarlet berries during autumn and winter. It is a relative of the potato. When well grown it forms a neat little bush, with small dark leaves, and bears a profusion of berries.

It can be easily reared from seed or cuttings in spring, but the easiest and best plan for the indoor gardener is to buy a berried plant in autumn. This plant may be placed in an ornamental vase on a table, where it will form a bright object for a long time. It must be watered about once a week in the way described on p. 130, and its foliage also be rinsed once a week by inverting the plant in the hands and dipping its head once or twice in tepid water. If the roots are once permitted to get dry the leaves will fall off.

In the New Year the older berries will gradually shrivel and drop off. When nearly all have fallen off cut the shoots back to within an inch of their base, and stand the plant in a sunny window. Water very carefully, and when new shoots sprout turn the plant out of its pot, remove some of the old soil, and repot in a larger pot, as advised in the chapter on potting. Keep in a sunny window till the end of May, then stand the plant out of doors in a warm spot. If one shoot grows longer than another, nip off its point.

In August berries will begin to form, and then the plants should be given a little weak manure water once a week. In September bring it indoors to a warm room, and in due

course the green berries will assume a scarlet colour, and its attractiveness once more begin. Nice berried plants,



A STANDARD-TRAINED FUCHSIA.

Fuchsias, whether grown as dwarfs or standards, make showy plants for room or window decoration.

however, can be purchased every autumn, so that it is hardly worth while to take the trouble to grow on the old ones.

The Orange and Lemon.—Both the Orange (*Citrus aurantiacus*) and the Lemon (*Citrus limonum*) are often grown as room plants, many persons taking great delight in sowing the pips and rearing their own plants. Seedlings, however, never bear fruit when grown in rooms. They require the aid of a greenhouse to enable them to grow into large bushes before they begin to bear fruit. Really, seedlings are only worth growing as a curiosity, and solely for the sake of their bright, evergreen foliage. A person skilled in budding might utilise the seedling as a stock on which to bud a superior variety of fruiting Orange, but to do this a greenhouse would be necessary.

All who rear oranges and lemons from pips must be prepared to forego the pleasure of obtaining either flowers or fruit on their trees. Those who want to have orange trees bearing fruit must buy the pretty Japanese or Kumquat Orange, a dwarf kind with small leaves and small fruits. Most nurserymen sell this variety in 6in. pots laden with oranges, which last a long time, and form quite a decorative feature in a vase on a dining table.

The plants require to be watered twice or three times weekly, and to have their foliage syringed at least once a week to remove dust. An "Abol" sprayer is an excellent syringe for this purpose. Once a month a teaspoonful of artificial manure should be given to each plant. The variety referred to will thrive in gas-lighted rooms.

Repotting is not required very often, and when it is it should be done by a skilled gardener. During July and August orange and lemon trees may be stood out of doors night and day. In this case the pots must be placed on a piece of tile or slate, so that worms cannot gain access to the roots, and watering must be carefully looked after.

Two other fruiting plants often used for table decoration are *Ardisia crenulata*, bearing red berries in autumn and winter, and *Rivinia humilis*, which bears scarlet berries in winter. Except when in fruit these plants require to be grown in a hothouse, but they will thrive for a short time in warm rooms.

CHAPTER VI.

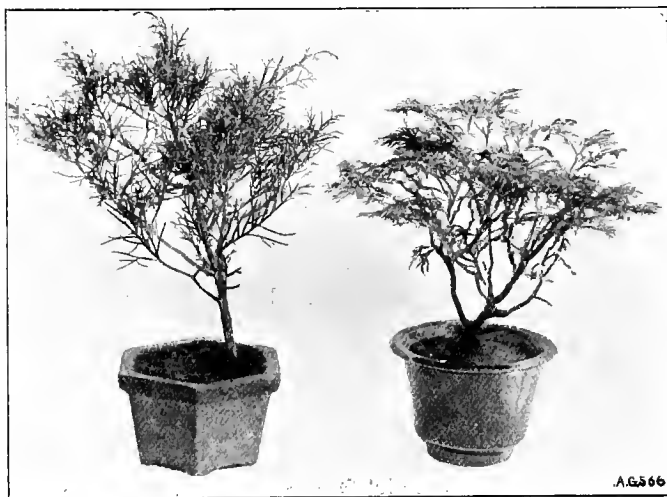
JAPANESE TREES FOR ROOMS.

DURING the last few years a large number of Japanese dwarfed trees have been imported into this country. These vary in age from a few years to hundreds of years, and they make very pretty plants for room adornment all the year round, or for balcony embellishment during the summer months. They are extremely interesting trees to cultivate on account of their age and their quaint shapes. It is true, some of the older examples are expensive, costing many guineas each, but those who can afford the luxury of cultivating one or two specimens will not regret their bargains.

Culture.—These trees require careful management to keep them in good health. During spring and summer *Thuya obtusa* should be kept in a sunny, airy situation, where the wind will pass freely through the branches. Water about once a day, giving sufficient to make the soil moist. In dry, hot weather it may be necessary to water twice a day; care, however, should be taken not to have the soil wet, and never water until the plant needs it. Watering overhead in dry weather is bad, but natural rain is always beneficial. During winter keep the tree in a cold greenhouse partially shaded, giving water about once in ten days; the soil, however, must never be allowed to get dry. Treated as above, this plant is very ornamental on balconies, terraces, etc.

If grown as a room plant it should never be exposed to the dry heat from lamps, gas, or fire, otherwise the leaves will drop off and the plant perish. *Pinus pentaphylla* and pine trees in general growing in jardinières require the same attention in watering and general treatment as *Thuya obtusa*, but are not so much influenced by atmospheric conditions; nevertheless, sun and air are necessary to maintain health, therefore keep the plants outdoors as much as possible.

Maples and other deciduous trees take the same treatment as *Thuja obtusa* as regards watering, but are much more accommodating than evergreens; in fairly mild climates the maples may remain outdoors all winter, but where the frost is very severe they should be kept in a cool cellar after the leaves have fallen in autumn; the soil must always be kept moist, but not wet. Early in spring place the plants outdoors and fully expose to all weathers, and when in full leaf use for decoration indoors as needed.



A.G.566

DWARF JAPANESE TREES.

Small coniferous trees imported from Japan. The two photographed are many years old.

Manuring the Trees.—When dwarfed trees commence growing in spring give manure twice a month during March, April, May, and June, and again in September and October; in the hot days of July and August give no manure, nor in winter and early spring. The best manure is finely-powdered bone-meal. To a jardiniere 1ft. in diameter apply



A DWARF JAPANESE CONIFER.

The plant figured is *Thuja obtusa*, and is reputed to be over a hundred years old. See chapter on Japanese Trees

three or four large teaspoonfuls (not heaped) spread evenly round the edge; a small jardiniere, say 3in. by 6in., will require about half a teaspoonful at each application.

Repotting.—Repotting is best done once in two or three years, as follows: Lift the plant out of the jardiniere, and with a sharp-pointed stick remove about one-third of the old soil around the edges and bottom, cutting away a portion of the old fine roots, but none of the strong ones; then replace the plant in the same jardiniere, first looking to the drainage—for a small, shallow one place a flat crock over each hole. Over this spread some rich, fresh soil; neatly balance the plant therein, and fill up with the same rich, fresh soil to within half-an-inch of the rim. Also the soil should be made sufficiently tight round the edges of the jardiniere to prevent the escape of water, it being of the first importance that the entire ball of soil be moistened at each watering.

Should the watering at any time be neglected and the soil become quite dry, put the jardiniere in a tub of water for fifteen minutes (not longer), and if the injury is not too serious the plant will recover. In the case of large plants use ordinary concave crocks for drainage, as for potting plants in general. After several repottings, the plant having increased in size, it will be necessary to supply a larger pot, but, as dwarfness is the thing aimed at, the smaller the shift the better.

Repotting should be done in February or March, just before growth commences. Where possible, we advise the above work to be done by a good gardener accustomed to handling heaths, azaleas, and similar hard-wooded plants. In the case of very shallow jardinieres it is desirable to annually replace a portion of the old soil to maintain a healthy growth.

General Treatment.—To maintain dwarfness in the trees, pinch back the young growth. Do this from April to the middle of June, and always with the finger and thumb. In



A DWARF JAPANESE MAPLE.

The tree portrayed is at least a hundred years old. Requires to be grown in the manner described in this chapter.

Thuya obtusa pinch out the points of the young growth all over the plant to maintain the form. In the case of pines pinch out the points of the irregular growth simply to maintain the shape of the plant. In the case of pomegranates, *Lagerstroemia indica*, flowering peach, flowering cherry, etc., pinch back the non-flowering shoots either before or after blooming; with wistarias, pinch back all the young growth in July and August, leaving only four or five leaves on each shoot. Maple and other deciduous trees are pinched back at the same time as *Thuya obtusa*, leaving two or four leaves, as may be necessary, to maintain the desired shape. Should a second growth be made, the same rule is followed as to pinching.

CHAPTER VII.

CACTI AND SUCCULENTS FOR ROOMS.

Two very interesting families of plants adapted for growing on an inner window-sill, or in a miniature greenhouse placed on a table near a sunny window. The cacti are leafless, having angular, round, or globose spiny stems of quaint shapes, and showy flowers, the beauty of which, however, is short-lived. Succulents are plants with fleshy leaves, some of which are quaintly marked or variegated, while others are green and curiously arranged. Some genera, too, bear pretty flowers. Both families of plants are strongly recommended as worthy of culture by the indoor gardener.

Select Cacti.—The following are very interesting sorts to grow in miniature pots: *Opuntia polyantha*, *O. phœacantha*, and *O. monacantha*; *Cereus serpentinus*, *C. flagelli-*

formis, *C. spachianus*, *C. peruvianus*, *C. macrogonus*, and *C. speciosissimus*; *Mamillaria pusilla*, *M. elongata*, *M. rhodantha*, and *M. centricirrha*; *Phyllocactus Ackermanni* and *P. phyllanthoides*; *Rhipsalis rhombea*; *Echinocereus Berlandieri*, *E. Scheeri*, *E. Salm-Dyckianus*, and *E. Ehrenbergi*; *Echinopsis multiplex*, *E. m. cristata*, and *E. oxygona*; *Echinocactus ottonis*, *E. Grusoni*, and *E. Pfeifferi*. Larger kinds to grow in ordinary pots are *phyllocacti*, such as *Ackermanni*, *grandis*, *albus superbus*, and *roseus grandiflorus*; *Echinopsis oxygona*; *Cereus flagelliformis* (Rat's-tail Cactus), *cœspitosus*, *Leeanus*, and *Opuntia vulgaris*. The Rat's-tail Cactus is an excellent plant for growing in a wire basket from the top of a sunny window. The *phyllocacti* produce very showy flowers, and so do the *echinopsises* and *cereuses*.

Culture of Cacti.—If the plants are received without pots care must be taken in repotting not to use those of too large a size, especially for the *manillarias* and *echinocacti*, which must be put into the smallest pots possible. One crock and a little turf or moss over it is sufficient for pots under three inches in diameter. The compost may consist of two parts turfy loam, one part leaf-mould, at least two years old, and one part sand. Pass this mixture through a quarter-inch sieve. A little lime rubble is beneficial if the soil and the water used are deficient in lime. This compost should be in a somewhat dry condition when used. Make it rather firm in the pots, using a label for the purpose in the case of the globular kinds. No water must be given for a few days. Shade the plants from the sun till well established. When all danger of sharp frost is over the little greenhouse is best outside the window.

Sprinkle the plants lightly on bright sunny mornings, admit air freely during the day, and leave just a chink on at night. All the plants mentioned are liable to be injured by the hot sun, excepting, perhaps, *Opuntia polyantha*, even when well established; therefore shade them during the hottest hours of the day if you wish to have nice, unblemished specimens.

During June, July, and August syringe or sprinkle the plants early in the morning, and again in the evening, and expose them to full air night and day when the weather is seasonable. During the above-mentioned period water in the evening, or, say, after four o'clock. Allow the plants to become quite dry before applying water again. Two applications a week are generally sufficient. At the beginning of September commence to reduce the supply by giving



A GROUP OF CACTI AND SUCCULENTS.

The quaint, weird looking plants at the back are cacti. The dwarf and silvery-looking ones in front are succulent-leaved plants. All are suitable for growing in small cases or on an inside window-sill.

water only once a week. Towards the end of the month, once in ten or fourteen days will suffice. Remove the little greenhouse into the dwelling at this time. During November, December, and January little or no water will be required. When applying water in the winter always choose

a sunny morning. Do not wet the plants overhead. On no account water during frosty weather.

Towards the end of March choose a fine morning, and give the little greenhouse a scrubbing with soap and water, and wash the pots. If the plants are dirty they may be cleaned with warm soap and water at the rate of two ounces of soap to a gallon of water, applied with an old shaving or other soft brush. Syringe the plants afterwards with clear water. When the soil is dry pick away the loose surface with a pointed stick, and replace with some fresh soil. If any of the plants require repotting March is a good time for the operation. Do not water for a few days afterwards.

Propagation of Cacti.—Increase of stock may be effected during the spring by seeds, cuttings, and offsets. Seeds should be obtained in a fresh state, and sown in very sandy soil, keeping them just and only moist, and covering the seed-box with a piece of glass to prevent undue evaporation. Cuttings must be secured with a sharp knife, and left exposed to the sun's rays for a few days, until the cut has callused, or healed; then they should be inserted in sandy soil in small pots singly until struck. Offsets should be detached manually from the parent plant, and treated in a like manner minus the drying process. It is a fact that any piece of the stem of a cactus will root, be it young or old growth, provided it be in a healthy condition.

Select Succulent-leaved Plants.—Those specially adapted for window culture are *Aloe arborescens* and *variegata*; *Crassula coccinea* and *lactea*; *Echeveria metallica*, *rosea*, and *retusa*; *Gasteria verrucosa*; *Haworthia attenuata* and *Reinwardtii*; *Kleinia articulata* (Candle Plant); *Mesembryanthemum felinum*, *tigrinum*, *blandum*, and *violaceum*; *Sempervivum arboreum variegatum*, *arachnoides* (Cobweb House Leek), and *tabulæforme*; and *Stapelia bufonia variegata*.

Culture.—The compost for succulents should consist of

loam, sand, charcoal, brick-rubble, and oyster-shells, in the relative parts as recommended for cacti. The same degrees of temperature may be adopted; repotting should be accomplished in the early spring, and the application of water must be governed by the knowledge that the natural construction of the leaves of succulent plants does not allow of such rapid evaporation of moisture as do those of other plants; consequently during the fall and winter months they will hardly require any, but when in full growth they demand a full and adequate supply. From April to, and including, September may be regarded as the general period of growth for most sorts. Needless to say, these plants thrive best in a sunny position.

Propagation is effected by either seeds, cuttings, division, or leaf-propagation. The former should be accomplished in early spring, treating as already advised for cacti. The echeverias and allied plants may be increased by simply pulling the leaves off carefully, and placing them on the surface of silver sand in a pan. It is only necessary to see that the base comes in contact with the sand. The broken leaves of aloes, if laid upon sand, will in due course root, and form plants.



CHAPTER VIII.

ORCHIDS FOR ROOMS.

THE question is frequently asked in "Amateur Gardening"—"Can orchids be grown in a dwelling-room?" Our answer is: A few may be grown thus with fair success, where no gas is consumed, and more especially in a window case that can be heated artificially to maintain an even temperature. Of course, it must not be expected that orchids will thrive as happily in a room, the atmosphere of which is more or less dry all the year round, and where the temperature varies considerably, as in a greenhouse. But the experiment may be tried of growing one or two on the inner window-sill and in a window case. Orchids grown to the flowering stage in a greenhouse may be placed in a room whilst in flower, and a very pretty and novel decoration they make.

Kinds to Grow in a Room.—Those we advise to be tried are: *Odontoglossum Cervantesii*, flowering in winter, very dwarf, and growing best in a pan suspended from the top of a sunny window; *Odontoglossum crispum*, blooming in spring, and best grown in a pot; *Odontoglossum Rossii*, a dwarf orchid, best grown as advised for the first-named species, flowers in spring; *Oncidium tigrinum*, a scented species suitable for pot culture, and flowering in autumn; *Sophronitis grandiflora*, a showy little orchid suitable for growing in a small pan suspended from the top of the window, blooms in winter; *Epidendrum vitellinum*, a summer-flowering orchid suitable for pot culture, and a very interesting plant; *Cypripedium insigne* (Lady's Slipper Orchid), a quaint orchid flowering in winter, and succeeding in pots. *Masdevallia harryana ignea* are also pretty orchids for pot culture and summer flowering.

Kinds to Grow in a Window Case.—All the fore-

going may be grown in a window case, artificially heated to maintain a temperature of 45 to 55 deg. from October to May; afterwards heat may be dispensed with. Additional kinds to grow thus are: *Odontoglossum Pescatorei*, requiring to be grown in pots, and flowering at various periods of the year; *Cœlogyne cristata*, blooming in spring, and doing best in pots or pans; *Ada aurantiaca*, flowering in spring, and succeeding in pots; *Lælia harpophylla*, spring-flowering, very pretty, and suitable for pot culture.



A POPULAR ORCHID—*CŒLOGYNE CRISTATA*.

A suitable orchid to grow in a sunny window in a warm room, or in a case.
Flowers, white, appearing in winter.

Management.—Orchids require far greater care than any other class of plants. Their leaves must be frequently sponged to remove dust, and watering be cautiously carried out. During the spring and summer the compost must be kept uniformly moist by immersing the pots or pans every other day or so, according to the heat of the room, in tepid

water. If the compost appears moist on the surface no water is needed; if dry, or partially so, give water at once. In autumn water will only be required about once a week; in winter about once a fortnight. On no account must manure of any kind be applied to orchids grown in rooms.

Those grown in cases will require to be shaded from sun, and to have air admitted freely by day in spring and summer. The bottom of the case should be covered with an inch of fine gravel or coke breeze, and this be kept constantly moist in spring and summer, and moderately so in autumn and winter. In very severe weather, during winter, even if the case be heated, it will be a wise precaution to withdraw the plants into the room, in order to run no risk of their getting frozen.

Any repotting required should be done in March; but it should be clearly remembered that orchids do not appreciate their roots being disturbed too often. So long as a plant is doing well do not repot. Study also the chapter on "Health and Care of Plants."

CHAPTER IX.

INSECTIVOROUS PLANTS.

HERE we have a very curious and interesting class of plants furnished with special apparatus for capturing small flies, and secreting a solution capable of dissolving the solvent portions of their bodies in such a way that the latter may be absorbed as food by the plants. Some of these curious plants are capable of being grown in glass cases in rooms, and they are so full of interest and novelty that we are sure readers of this volume would be glad to know something



SARRACENIA FLAVA MAXIMA RUBRA.

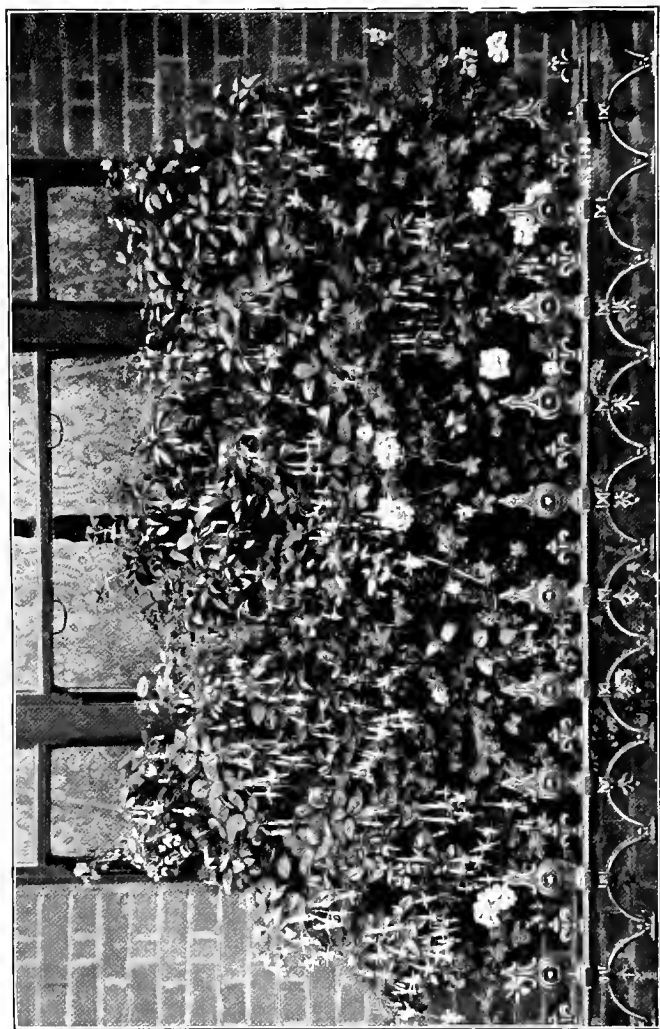
An insectivorous plant which traps insects in its tubular leaves.

about them. We will therefore describe those suitable for room culture.

Dioncæa muscipula (Venus's Fly Trap).—This is a small plant with winged leaf stalks radiating from the root, and terminating in a leaf with two lobes, hinged in the centre and fringed with hairs. In the centre of each lobe are three bristly hairs, which are extremely sensitive. When the lobes are fully open, and a fly alights upon and touches the central bristles, the former immediately close and imprison the fly. So long as the fly is alive and touches the bristles the lobes keep closed. When the fly is dead the secretion on the leaf attacks its body, and dissolves the fleshy portion, which is absorbed by the leaves. In due course the lobes open and await the opportunity of securing another fly, and so on. The surface of the leaf when exposed to the light has a beautiful appearance, the globules of secretion thereon scintillating in the sunshine like brilliants.

Darlingtonia Californiæa (Californian Pitcher Plant).—Another curious plant, with tubular leaves a foot or so long, terminating in a kind of hood, furnished with two spreading blade-like appendages. The orifice, or entrance to the tube, is on the under side of the hood. Inside there are long hairs pointing downwards. An insect entering the tube can proceed downwards easily enough, but the hairs prevent its return, and it falls a victim, its body being gradually assimilated by the leaf. The tubular leaves are prettily marked.

Cephalotus follicularis (Australian Pitcher Plant).—A very quaint plant with short, spoon-shaped leaves and stems bearing small pitchers furnished with lids. The pitchers are clustered around the base of the plant, green, spotted with purple or brown, and furnished inside with hairs. The flies enter in search of food, and are prevented from leaving by the reflexed hairs, thus becoming prisoners and being absorbed by the pitchers.



A SHADY WINDOW GARDEN.

The box is planted with tall fuchsias which are excellent plants for a shady or partially shady window sill.

Sarracenias (Huntsman's Horn, or Side-Saddle Flower).—There are several species of this genus, viz., *S. Drummondii*, leaves white, green, and purple; *flava*, cream and yellow leaves; *purpurea*, leaves veined with purple; *rubra*, leaves also veined with purple; and *variolarias*, leaves spotted with white. These have tubular leaves, with a lid-like appendage at top. The pitchers are usually full, or nearly so, with water, and any insects which venture within speedily become drowned.

Drosera (Sundew).—There are three British species of insectivorous plants which trap small insects on their viscid leaves, and absorb the solvent portions of their bodies. These are *Drosera rotundifolia*, *longifolia*, and *anglica*. The most common species is the first, and this is frequently to be met with growing in boggy, moist places. This species has orbicular leaves, furnished with red hairs and covered with a viscid substance. When small flies alight upon it their feet become attached to the surface of the leaves. Slowly the hairs bend over the hapless creature, and there is no possible chance of escape. Gradually the body decomposes, and is absorbed, the wings and legs alone remaining to tell of the murderous instinct of the plant.

Cultural Notes.—The whole of the foregoing require to be grown in shallow pans or pots, or in a bed of equal parts of peat and sphagnum moss, the latter a plant growing in bogs on moors. It is, perhaps, preferable to grow them in pots, well drained, and to plunge these in a bed of fresh sphagnum moss. Half fill each pot with crocks, and in the case of the *Darlingtonia* add a few pieces of limestone. The plants must be grown in a Wardian case or under a glass globe or shade, so that dry air can be excluded. The case, too, must be stood in partial shade. The moss must be kept uniformly moist, and the compost in the pots also. Every morning open the case for a few moments to disperse foul air, and also wipe off accumulated moisture on the inside.

The *Droseras* may be collected on any boggy moor. Lift them with plenty of moss and bog attached, and plant in a pot and place under glass as soon as possible. Plants of the other kinds can be purchased at most nurseries.

CHAPTER X.

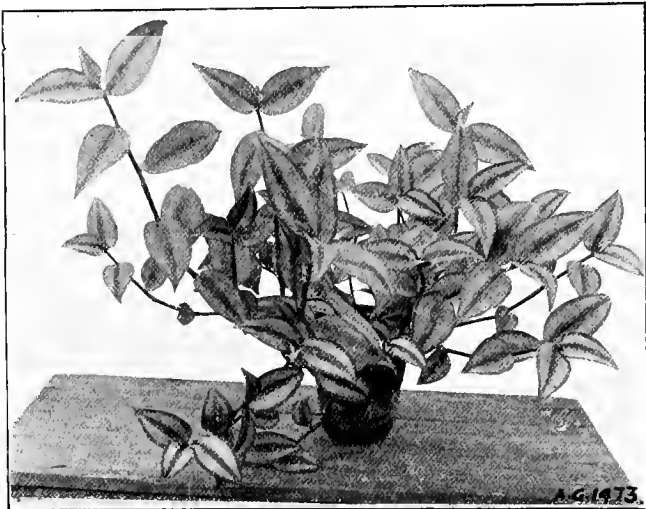
ROSES FOR ROOMS.

ROSES cannot be said to do really well as window plants. Still, there are folk who are partial to them as such, and if they do not mind the worry of having to keep the foliage free from insects, and are satisfied with a few flowers, then let them grow them, by all means. The great difficulty with roses as window plants is the liability of their tender leafage to injury by insect pests and cold draughts.

Kinds to Grow.—The best sorts to grow are varieties of the polyantha type, as *Cecile Brunner*, *Madame N. Levassieur*, *Perle d'Or*, and *Georges Pernet*, dainty sorts not exceeding a foot high; chinās, like *Red and White Pet*; teas, like *Lady Roberts*, *Sunrise*, and *The Bride*; and hybrid-teas, like *Liberty*, *Papa Gontier*, and *Madame Abel Chate-nay*. There is another class, too, called the *Fairy Rose*, which is easily reared from seed, and which flowers when about three months old. The ones we recommend specially to be grown are the polyanthas and chinās.

Culture.—These should be purchased in pots in autumn, and kept near a window in a cool room till after Christmas. Then all very weak shoots should be cut right away, and

the others shortened about one-third. In February place near a sunny window, and begin to water moderately. Turn each plant round a little every day, so that all sides eventually get the sun. Keep a sharp look-out for greenfly. If it appears, spray the plant at once with "Abol" insecticide. As soon as flower buds form give liquid manure once a week. After the plants have finished blooming, which will be about June, stand them outdoors in full sun, and see that they are



TRADESCANTIA (*Zebrina pendula tricolor*).

A pretty ornamental-leaved trailing plant for growing in hanging baskets in windows. Leaves variegated with white, green and red.

watered regularly. Leave them there until October, when repot and bring into a cold room, or even a cellar will do, and give water only about once a month. Slips of these roses will strike root readily in a bottle of water hung in a window during the summer.

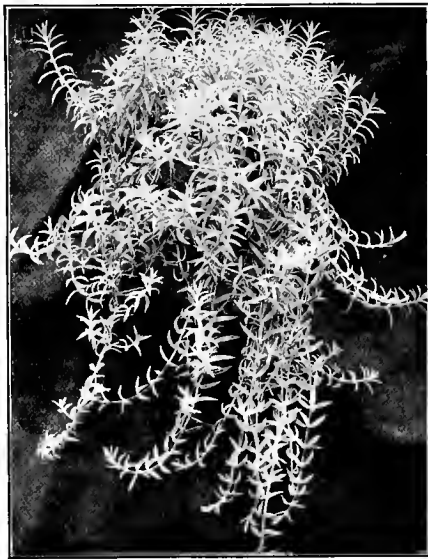
CHAPTER XI.

HANGING BASKETS FOR ROOMS.

A VERY pretty way of growing window plants, and one often practised by town and cottage gardeners, is the culture of scandent-stemmed plants in wire or wooden baskets suspended from the top of the window. The usual plan, and a good one withal, is to grow the plants in pots and then place them, surrounded by moss, in the baskets. When the plant is grown in a pot it is more easily removed and replaced than when planted in soil solely in the basket. We recommend the plants, therefore, to be grown in pots and simply placed in the basket.

Suitable Plants for Baskets.—The following plants are specially suited for culture in suspended baskets: *Asparagus Sprengeri*, a plant with very finely-divided, fern-like foliage, produced in large drooping fronds; *Cereus flagelliformis* (Rat's-tail Cactus), has whip-like stems, studded at their base with rosy flowers, very pretty and quaint; *Campanula isophylla* (blue), *isophylla alba* (white), and *balchiniana* (variegated foliage) are three lovely drooping plants forming an attractive feature in a basket; *Fuchsia procumbens* is a dainty trailing plant with miniature yellow and green flowers, succeeded by blue berries, most effective; *Isolepis gracilis* (Club Grass) is a slender-growing grass, the stems of which hang gracefully over the sides of the pot; *Lotus peltorhynchus* (Pigeon's Beak Trefoil) is a curious plant bearing scarlet pea-like flowers, very suitable for a sunny window; *Othonna crassifolia*, a drooping-stemmed plant with fleshy leaves, is very graceful as a basket plant. Ivy-leaved *Pelargonium*, in its several varieties, make delightful basket plants, especially the silvery-leaved *L'Elegant*. *Linaria cymbalaria* (Ivy-leaved Toadflax) is also a charming little

native plant, with ivy-like leaves and mauve flowers, for basket culture. So, too, is *Saxifraga sarmentosa* (Mother-o'-Thousands, or Wandering Jew), with its long, trailing shoots studded at intervals with little plantlets. Its variety *bicolor* has creamy-white foliage. The green and golden forms of the Creeping Jenny, too, make excellent basket plants. *Selaginella caesia* is a trailing moss with bluish-



A PRETTY TRAILING PLANT.

Sedum sarmentosum variegatum has slender pink stems and fleshy leaves prettily marked with white and green. Suitable for hanging baskets.

tinted stems and foliage that makes an ideal drooping plant. *Sedum Sieboldii medio-pictum*, with white and green fleshy leaves, also makes a very interesting basket plant.

The *Tradescantia* (*Zebrina pendula tricolor*) has prettily-marked foliage, and *Sedum sarmentosum variegatum*, with its pink stems and green and white fleshy leaves are both excellent plants for hanging baskets. Yet another interesting plant with trailing stems and small green leaves for growing in pots on the inner window sill, or in suspended baskets, is *Helxine solieroli*, an illustration of which appears on p. 137.

Cultural Details.—Any or all of these plants, including the musk, may be relied upon to do well as hanging plants. The pots should be placed in the centre of the baskets, and the space between the two packed tightly with moss. In spring and summer soak the pot and basket in tepid water twice a week; at other seasons once in ten days will suffice. Musk, Creeping Jenny, and Wandering Jew will do well in a sunless window; the rest require sun. Wire baskets can be purchased at any ironmonger's shop.

CHAPTER XII.

NOVEL PLANT CULTURE.

THE following notes, describing several interesting ways of growing plants under novel conditions, may be of service to those readers who are fond of carrying out uncommon experiments.

Growing Plants on a Sponge.—Procure an old or a new sponge, soak it in water, and sprinkle mustard, cress, grass, wheat, or other small seeds all over its surface. The seeds will fall into the cavities, and in due time sprout and produce foliage. Keep the sponge moist, and suspend

it close to a window; then in a few weeks it will be a mass of greenery.

Growing Plants on Flannel.—Wrap a piece of flannel around a porous brick, soak it in water, and sprinkle grass or mustard and cress seeds thereon. Place the brick in a dish containing a little water to keep the flannel moist.



[Photo: L. T. Bastin.]

MUSTARD AND CRESS.

A novel method of culture on a wet sponge.

The seeds will eventually sprout, root, and make an interesting novelty.

Growing Acorns in Bottles.—Collect oak acorns in autumn, run a stout piece of thread or fine wire through

the middle of each one, and suspend it halfway in a small bottle. Secure the ends of the thread or wire to the neck of the bottle, drop in a lump or so of charcoal, and add rain water to nearly touch the acorn. Cover the mouth of the bottle with paper, and stand in a warm room. In due course the acorn will sprout, produce roots, which will feed upon the water, and then a stem and leaves. If the water be replenished from time to time the oak will grow for a very long period. An excellent plan of showing the process of germination of a seed.

The oak may, when well rooted, be planted in a small pot and grown on as a window ornament. Each autumn the leaves will die, when water should be withheld. In March turn the plant out of its pot, remove the old soil, shorten the roots, and repot in the same or a slightly larger pot. By this process it is possible to grow an oak tree as a miniature for years.

Chestnuts in Water.—Horse chestnuts, or “conkers,” are easily grown in bottles of water. Procure a bottle with a mouth wide enough to hold the nut firmly in the neck, and add rain water to just touch the base of the nut, and stand close to a window. Eventually roots, and then a stem and leaves will develop, and if the water be regularly replenished the “tree” will grow for years in the bottle.

“Carrot Fern.”—The upper two or three inches of a large carrot should be selected, the tapering point being cut off. The former may then be planted in a small pot of ordinary mould, kept moist, and placed close to a sunny window. In a short time the stump will put forth its elegant foliage, which will grow so long as the supply of reserve food in the stump lasts. The leaves in this case feed upon the food stored in the cells the previous year.

Another way is to cut off the tapering end of the root, and scoop out the centre of the other part, taking care not to injure the crown. Run two wires, or some twine, through the sides of the stem, and hang it up crown downwards in

a sunny window. Keep the hollow filled with water, then the crown will produce leaves, which will grow up around the stump and make a pretty object. The upper part of a beet-root may be treated similarly.

Monarch of the East (*Sauromatum guttatum*).—A tuberous-rooted plant belonging to the Arum family, bearing purple, yellow, and greenish flowers in winter. The



[Photo : L. T. Bastin.]

NOVEL PLANT CULTURE.

On the left is shown a Carrot root sprouting in the air, and on the right a Houseleek growing in a glass of water.

tuber has simply to be placed in a saucer without water or soil, then stood in a warm room. In a few weeks the quaint flower will make its appearance without any foliage. After flowering, the leaves appear, when the tuber must be planted in a pot so that it may form roots to obtain a fresh supply of food.

Spanish Moss (*Tillandsia usenoides*).—An interesting little tropical plant that requires no soil in which to grow. It has simply to be suspended in a warm room and soaked occasionally in water.

Resurrection Plant.—Two plants are sold under this name. One is a moss called *Selaginella lepidophylla*, and the other a cruciferous plant called *Anastatica Hierochuntia*. Both are imported in a dead and dry state, and possess the property of apparently reviving when placed in water, and curling up into a ball when not in water. Being dead, of course, the revivification is only apparent, and simply means the relaxation of the dead tissues. See illustrations on pp. 117, 119, 143, and 147.

CHAPTER XIII.

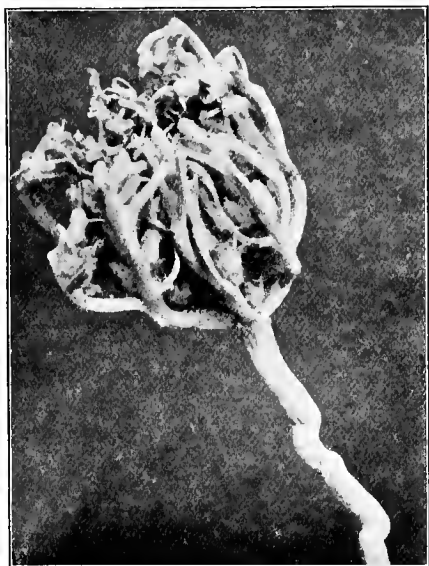
FRAGRANT PLANTS FOR ROOMS.

THERE is a good deal of fascination about plants that possess fragrant foliage or flowers. Flowers which exhale a sweet perfume to permeate the air, or foliage that, when touched, emits a pleasing fragrance, always command universal admiration. What is sweeter than the delicate perfume of the musk, a plant beloved by everyone for centuries? This and others we are about to name ought certainly to be grown in every home, where perfume is appreciated.

Plants with Fragrant Foliage.—One of the sweetest and best is the Sweet-scented Verbena (*Lippia citriodora*), a shrubby plant with pale green foliage possessing a delicious scent. It loses its leaves in winter, and has then to be kept somewhat dry. In March prune the shoots slightly, repot, and start to grow again. Then there are several pelargoniums with fragrant leaves, such as *Crispum*,

citron-scented; odoratissima, peppermint-scented; and radula, balsam-scented. The Myrtle (*Myrtus communis*), too, has fragrant leaves and flowers; and the Blue Gums (*Eucalyptus globulus* and *citriodora*), scented foliage.

Plants with Fragrant Flowers.—These include the Musk (*Mimulus moschatus*), yellow; Heliotrope (*Heliotropium peruvianum*), mauve or purple; *Cytisus racemosus*



ROSE OF JERICHO (*Anastatica Hierochuntia*).

An oriental plant imported in a dead state which has the property of apparently reviving after immersion in water. See p. 116.

("Genista"), yellow; Mignonette (*Reseda odorata*), Sweet-scented Tobacco (*Nicotiana affinis*), and *Daphne indica*. Lilies emit rather too strong a perfume to be grown in rooms.

CHAPTER XIV.

HOUSE GARDENS.

WE feel we cannot adequately conclude this section of the present work without including a most delightful essay on indoor gardening, contributed to "Amateur Gardening" by J. C. M. Baker, of Brighton. The authoress describes in a delightful way the pleasure she derived from the cultivation of favourite plants, and the arrangement of cut flowers in her house. But we will let her tell the story in her own words:

Many enthusiasts do not know the great joys of house-gardening, of the many sweet things that can be saved from the clutches of winter; of the wealth of colour and scent that can be had from November, without glasshouses or heavy florists' bills. This, with no more space than a back-yard, a box-room, and a few sunny window ledges. The health and pleasure that can be got from the possession of a box or big bay window facing south-east, or a bit of glazed verandah, cannot be measured except by enforced stay-at-homes.

The writer is the happy possessor at the moment of such a large bay facing south-east, which can command dawn and moon-rise over the downs, and which catches the sun all day as in a trap. At each wooden support has been fastened, by means of a wire and nail, small earthen pitchers the colour of the woodwork; these are filled—at time of writing—with long trails of nasturtiums, trained round the glass nearly to the top. A needle-point here and there through a stem into the woodwork keeps them in place. These trails were cut three weeks ago, and have been growing gloriously in the sun ever since, throwing out their brilliant flowers on longer stalks than they ever do outside, adapting themselves with a natural grace to the situation. They will go on growing for another two weeks or more, for the jars are getting full of tiny white rootlets, which push out from every joint under

the water; the latter is rainwater, is replenished once a week, and kept sweet by a piece of charcoal.

Beside the nasturtium frames there is a genista (*Cytisus racemosus*) brought in from its summer rest outside, and now full of bud. A Japanese branch of pear blossom, which budded, thinking the spring had come, and has opened in water, and been a joy for days. Two large pots of tall chrysanthemums complete the present window garden. When



ROSE OF JERICO.

The plant figured on p. 117 showing its condition after immersion in water.

the nasturtiums are over, their place will be taken by long sprays of wood ivy, the fine close kind that grows up the trees. These will last for weeks, also throwing out roots into the water, and can be replaced, when needed, all through the winter. They will make the fittest background for the various bulbs which come with the spring.

But this paper will not help the inexperienced flower-lover

unless it descends to the beginning of things. This commences in early winter with the procuring of bulbs. Make a speciality of those which can be planted in bowls, or glasses, and require no drainage. And here let me give a hint: Do not go in for too much variety at first. A few shillings will give enough crocuses, daffodils, narcissi, and tulips for early, mid-season, and late flowering. Again, do not mix colours too much. For example, in my darkened top-room there are white freesias with white crocuses in delicate china slop bowls—the relics of departed tea services. Sky-blue and white hyacinths in blue and white bowls; white crocuses with bright blue scillas in white Minton china; and seed pans of Roman hyacinths planted with space left for ferns and moss. This is a blue and white scheme, which will have one large bowl of early white narcissi as the *piece de resistance*. From two to three weeks should be allowed between each bulb planting to ensure a succession of blooming.

Yellow is my next change. The earliest Tenby daffodils in Indian brass bowls; jonquils and pale trumpet daffodils in green glazed pottery; yellow crocuses in shallow glass dishes; and gold Mont Tressor tulips in green Japanese basins, and so on, changing the colour with the month through all the dark days. Fresh fern moss must cover the bulbs when they are brought into the rooms.

To add to these, there may be outside treasures available to some. A single bough of fir, with some cones for a tall jar; a branch of holly full of berries; flowering laurestinus or fragrant bay.

Then there are seed-pan gardens. The prettiest little Japanese garden I ever saw was contained in a large shallow seed-pan. A clump of snowdrops—the big-flowered kind—was lifted when in bud from the garden, with a good ball of earth round the bulbs, and put on one side of the seed-pan; a low-growing, strong plant of yellow winter aconite, the quaint little Elizabeth-frilled flower, also full of bud, was put in front. The whole left room for a spread of fresh fern moss, which had tiny ivy roots, and a miniature fir tree a few inches



THE SUN-TRAP BAY WINDOW.

This is the window described in the text, and contains ivy trails, chrysanthemums, and flowering tree branches.

high. This delightful wee garden lasted in beauty for three weeks in the house, all the more precious as snowdrops will not grow in fibre, or take kindly to indoor cultivation.

These seed-pan gardens would be a constant delight to anyone who would care to experiment. Another could be planned with the slender violet-scented *Iris reticulata* that flowers in February, with the help of a few well-chosen stones, fibre, and a clump of mauve crocuses and moss, or white freesias and blue *chionodoxa*. The grouping should always allow of some spaces of moss between the clumps, and avoid bunching in the centre, or placing two things tall in the same pan. You must remember you are planning a garden, and not a pot of flowers. Miniature ornamental grasses, or seedling ferns, are lovely planted in the moss with care after the bulbs show bud. An infinite variety of tiny growths can be found wherever moss grows, for a carpet for a bulb garden.

There is also a great variety in the receptacles one can use for table decoration. Pink Cottage Maid tulips look their best in pink and white china, pewter, or silver. Old cruet stands with the handle unscrewed, and a glass finger bowl or dish sunk into it, hold the fibre for hyacinths; even the large, old-fashioned salt-cellars will hold a bulb each, and if a rose bowl is not available, a spare salad bowl will do equally as well for daffodils or narcissi. It only needs a wise selection and planting at intervals to keep up the procession.

As the early spring comes round and the buds are swelling on the trees, many additions can be made to the house-garden. Very few people know that large branches of many things will blossom in water if the stem is split up to a joint or bud. One cold backward spring, when nothing but the snowdrops seemed to have courage to brave the east wind, I brought in some long rods cut from an almond tree, some branches of willow all over little furry knobs, and some large sprays of blackthorn just showing bud. The stems were split to a joint (about three to four inches), and all put into pickle jars with rain-water and charcoal. They were stood in the sunny bay of a spare room and left to themselves. In a week or ten

days the plump buds on the almond were bursting like Aaron's rod; the blackthorn was powdered with snowy blossoms, and



HYDRANGÆA HORTENSIS.

A Japanese plant which bears white and sometimes blue flowers in large trusses during summer. The plants are grown in pots, and stood while in flower in the artistic teak tub illustrated. A splendid ornament for entrance halls or rooms.

the willow was covered with gold-dusted "palm" which scented the spare room with a honey-sweet smell. With keen

delight I moved my treasures into the living-rooms; the almond opened fully and held its fairy petals for many days. The blackthorn was at home in white Japanese jars, and the gold palm made the exact setting for early trumpet daffs.

When a warm spring day woke up the world, the bees followed the honey-smell through the open window—evidently there is a potent toddy in our “palm,” for the bees hung to the flowers unable to fly away, or fell to the ground all round the jars, covered with the gold pollen, and in a blissful state of intoxication. They were swept up in a dust-pan and removed outside. In an hour or so they recovered and flew away. The willow and almond, after dropping their flowers, put out shoots of tender green, gaining a new beauty; and, I believe, had they been planted then, would have rooted easily.

A little later the same experiment was tried with crab apple and wild cherry, with equal success; and in early summer two very large branches of white and purple lilac, treated in the same way when showing bud, flowered, and went on flowering for over a month in jars of water. These are temporary additions to the house-garden, but wherever possible it is far more fascinating to have things really growing.

Much can be done without the aid of glass. A tiny garden, or yard even, a frame and a few hand-lights, will do wonders in keeping up the supply. If people would only give up the idea that all pot things must be tender aliens, requiring to be forced out of their season—coddled in conservatories and forcing houses—they would find a host of hardy things ready to respond to love and care for their simple wants. The gardening books and papers discourage the amateur with technical jargon about “hotbeds,” “intermediate houses,” and that most depressing phrase to the town gardener, with nothing but a back garden, and that a cat’s matrimonial agency, to wit, “shifting” and “potting on.” But there are flowers that would not say thank you for being disturbed once a month, and being kept in a hothouse. It is from these we must grow our house gardens.



AN EFFECTIVE GROUP OF INDOOR PLANTS.

In the centre is the popular room palm *Howea (Kentia) belmoreana*, surrounded by Roman Hyacinths, freesias, and ferns.

.. Now, say there is a town garden, or backyard, available, where the sun comes on his visiting day. There is such a wall here; under it is a row of large new seed pans, square and round, and big pots filled with fresh crocks and good soil—a few bushels mixed by a nurseryman—these are being planted with hardy garden things. The pans with forget-me-nots, pansies, iris, late tulips, and violets. And the pots with strong young rooted cuttings of Dorothy Perkins roses, Canterbury bells (mauve and pink), Marguerite carnations, and doronicums. They will be buried up to their rims in the border, and stay there till they are in flower. A little fresh soil on the top in spring, and care in pruning and tying up, will be all that is needed. If hard weather comes, a few sheets of brown paper or mats will shelter them.

Early in the spring more pots will be sown with mignonette and a few gay annuals, and morning glories, which will be trained up canes; and a little later, some rooted cuttings of hardy chrysanthemums will be planted in pots and plunged with the others in the border. All these things will grow and care for themselves, as if in the open ground. In good soil, with room to grow, they will make large plants, only needing to be watered in dry weather; and when in flower, in their natural season, can be lifted, the pots washed, and carried to the house.

I remember seeing magnificent pyramids of cup-and-saucer Canterbury bells in large pots, as fine a sight as any greenhouse darling, and white and mauve chimney campanulas (*Campanula pyramidalis*) treated this way will be a joy for many weeks.

Hardy border flowers are in endless variety, not to speak of flowering shrubs and fruit trees, grown as the Japanese grow them—for their blossom. None of these things want hothouses or forcing if we are content to have them in bloom in their natural order.

Because they are hardy, border plants grown in pots must have sun and air; they should be stood outside at night, and be given an open-air bath every morning, besides watering

in the evening; they will not suffer then from being housed. Bulbs should be potted in fibre in early September; they will then be ready when the chrysanthemums are passing. So, you see, all the year through, the bay window can have its flowers.

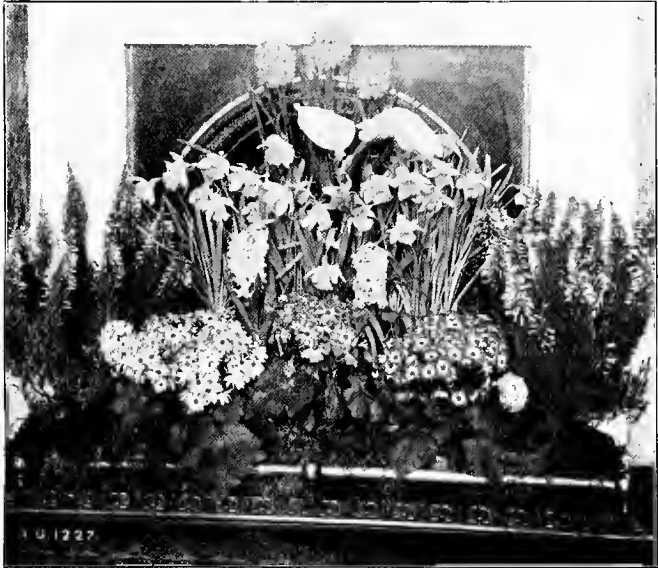
And now a word as to the window. Sunshine and light bring life to plants, they bring life to us too. Every home should have one or more of such sun traps as I have described; and where there is an invalid, or one too old or feeble to enjoy outside pleasures, I can fancy the gift of a bay window with its simple fitments, added as a surprise, would give a new spell of life and health through the interest and pleasure it would give to watch and care for the growing things. Put a bird, or cat, or child in such a window, and see the pleasure and satisfaction it will show; how much more then the sensitive invalid, so dependent on a small joy, and indoor occupations. It is hardly too much to prophecy that if there were more house-gardens, there would be less "house nerves."

CHAPTER XV.

FIRE-PLACE DECORATION.

DURING late spring and the whole of the summer many housewives like to add to the beautification of their drawing-rooms by adorning the fire-places with flowering and foliage plants. Now, this is a very pretty phase of indoor gardening which ought to be encouraged. If only a single palm be stood on the hearth this will add greatly to the charm of a room; but if a few flowering plants, intermixed with ferns and other foliage plants, be arranged tastefully in a group on the hearth, then the effect will be still more beautiful.

Suitable Plants.—For decorating the hearth in May bulbs, cinerarias, spiræas, genistas, calla lilies, and azaleas are appropriate flowering plants. During summer zonal and ivy-leaved pelargoniums, petunias, musk, hydrangeas, heliotropes, and fuchsias will yield a bright and pleasing assortment of colours. Then, in the way of foliage plants, such palms as the *Kentia*, and other subjects, as *Cyperus alterni-*



A FIRE-PLACE DECORATION.

The display illustrated includes cinerarias, daffodils, hyacinths, arum lilies and heaths, all spring flowering.

folius, *Dracæna indivisa Veitchi*, and *Bruanta*, the Silvery-leaved *Eulalia*, the variegated *Anthericum variegatum*, and *Ophiopogon Jaburan variegatum*, also *Begonia Rex*, and *Grevillea robusta* will make a suitable selection to mingle

with the flowering plants. For forming an edging to the group, *Isolepis gracilis*, musk, and small ferns may be utilised. Any of the ferns advised for rooms may likewise be used.

Arranging the Plants.—Place a palm in the centre and a tall fern or other foliage a foot or so apart. Between these place the flowering plants, arranging them so that they are not too densely crowded, but yet so that the pots are hidden from view. The surface, too, of the group should not be too formal, but well broken up by using some plants taller than the others. Finish off the edge of the group with the small plants already advised.

General Hints.—The plants will require water about twice a week. Each one should have its pot immersed in water for a short time. Earthenware saucers should be used to stand the pots in, in order to prevent moisture from the latter injuring the hearth. When a plant begins to show the least signs of shabbiness remove it, and replace by a fresh healthy plant. If these hints are strictly followed the fire-place may indeed be converted into a very pretty floral feature.





Part III.—MANAGEMENT.

CHAPTER I.

WATERING INDOOR PLANTS.

THERE is a good deal of art in watering plants grown in pots. Many and many a valuable plant has been lost through ignorance of the proper method of applying water. Too much water causes the soil to turn sour and the roots to decay, and in due course the foliage also to become unhealthy. Too little water, i.e., not enough to moisten the soil equally throughout, causes the finer and more important rootlets to shrivel and die. Really, too much care cannot be taken in watering a plant.

Wrong Methods.—First of all, it is a grave mistake to add water in dribblets by means of a jug. The “little and often” principle so frequently practised sodden and sours the upper layer of soil, and rarely penetrates to where the main roots are. When the surface becomes sodden the interstices of the soil are filled with stagnant air and fresh air cannot penetrate to the roots.

Then, again, it is a mistake to use cold water. Plants grown indoors usually have their soil and roots of the same temperature as the air of the room. To apply cold water

therefore, is to give the delicate roots a serious chill, and to make the plants unhealthy.

Right Methods.—The proper mode of watering indoor plants is by thoroughly moistening the soil at each application. After first ascertaining, by rapping the side of the pot with a stick or the knuckles, if the plant needs water or not, and assuming it does, immerse the pot nearly to its rim in a vessel—a pail or tub—of water, and let it remain thus for about a quarter of an-hour, until air bubbles cease to rise. The next point is to use water of the same temperature as the air of the room. Remember, also, that rain is better suited for plants than tap water; it is softer and more nourishing to them.

How Often to Water.—From October to about March all growing plants will only require to be watered as just advised, about once in seven to ten days. Plants growing in a warm room require more water than those in a cool room. From March to October water will be required about every four to six days, according to the size of the pot, quantity of roots, and the heat of the room. No hard-and-fast rule can be laid down as to when water is needed. The safest way is to rap the side of the pot and listen to the sound. If it be dull and heavy no water will be needed; if hollowish or ringing in sound, then water will be instantly required.

Plants that Need Little Water.—Cacti and succulent plants require very little water in autumn and winter; in fact, they may almost be kept dry. Bulbs that have not started to grow, and fuchsias and geraniums that are at rest during the winter, may be kept nearly dry. Plants with evergreen foliage, like palms, ferns, aspidistras, and myrtles, require to be kept uniformly moist all the year round.



A REGAL PELARGONIUM.

One of many varieties of large-flowered pelargoniums which do well in rooms.

CHAPTER II.

POTTING INDOOR PLANTS.

Most lovers of indoor plants like to indulge in the pleasure of repotting their favourite plants. Sometimes, however, this zeal is carried to excess, and more harm than good follows the operation. Too frequent repotting is not beneficial, and this evil is often greatly intensified by the faulty way in which the operation is performed. The subject, therefore, is one which we must not pass over too lightly in this volume.

When to Repot.—A plant should only be repotted when it has (a) filled its pot with roots, or (b) when the soil has become sour and the roots or foliage more or less unhealthy. There is also a third reason for repotting, and that is, when by accident a plant is knocked down and its pot is broken. The proper season to repot in the first case is during March or early April, when new growth is about to actively begin. Repotting in the case of a healthy plant should never be done in autumn or winter, when growth is more or less dormant. In the second and third cases repotting must be done as soon as the need for it is apparent. Bulbs and dormant roots, as lilies of the valley, Solomon's Seal, and spiræas, are exceptions to the foregoing rules; they are best potted in autumn.

Pots.—Pots are made in various sizes, ranging from 2in. up to 18in. in diameter, and are made of burnt clay. These are the best kinds of pots to grow plants in. Those made of glazed ware are not so suitable for the purpose, because, owing to air being unable to penetrate the glaze, superfluous moisture cannot escape, and the continued presence of this excess renders the soil sour and the roots unhealthy. Glazed

pots may, however, be used for holding plants grown in earthenware ones. The latter, if new, should be soaked in



PARTRIDGE BREASTED ALOE (*Aloe variegata*.)

A pretty succulent-leaved plant for window culture. Commonly grown in cottage windows.

water for a few hours before using. If previously used they should be soaked in hot water, and be well scrubbed to render

them quite clean. Dirty pots should never be used for re-potting.

In addition to the pots, clean crocks or potsherds are also desirable. Broken pots should be well washed, and then broken up small in sizes varying from a quarter-inch up to two inches or so. These are required for drainage purposes. Failing these pieces of broken bricks or cinders, previously washed clean, will suffice.

Compost.—The ideal compost is composed of the following ingredients: Loam (rotten turf from an old pasture or common), leaf-mould (decayed leaves from an oak cop-pice), peat (a soil of a dry, spongy nature, obtained from boggy districts), decayed manure (cow or horse dung well rotted), charcoal (burnt wood), and silver sand (a white sand obtained chiefly from Bedfordshire). These materials are sold by the peck, bushel, or bag, either separately or mixed, by all florists.

Generally speaking, a compost of two parts loam, one part decayed manure, and half a part of sand will make a suitable soil for ordinary plants like fuchsias, geraniums, bulbs, etc. For palms, aspidistras, and indiarubber plants, two parts of loam and one of equal proportions of leaf-mould, peat, and sand will suffice. For ferns, equal parts of loam, peat, leaf-mould, and sand will be a suitable compost. For orchids, peat alone, with a little charcoal and chopped fresh sphagnum moss, is the usual compost. A small amount of charcoal may be added to all the foregoing composts, because of its valuable property of keeping the soil sweet. Ordinary garden mould and horse droppings rubbed very fine, with road grit, make a rough and ready compost, but the plants rarely do so well as when grown in the proper ingredients.

It is not necessary to sift the ingredients. Simply break the peat or loam up into small nodules from the size of a hen's egg downwards, and well mix the whole together. Where only a limited amount of compost is required, the

reader is advised to buy the required mixture ready prepared from a florist.

Preliminary Steps in Repotting.—Any plant it is desired to repot should be well watered a few hours beforehand. If the soil of a plant about to be repotted be somewhat dry when it is placed in fresh mould, and water is given, the latter will penetrate the new and not the old soil: and, as most of the roots are in the latter, the roots will shrivel for want of moisture, and the leaves turn yellow and die. If, however, the old soil be thoroughly moist at time of repotting, then any water applied later will penetrate old and new equally.

The next thing is to turn the plant out of its pot. Invert the plant, grasp the base of the stem between the fingers and give the edge of the pot a smart tap on the edge of a table. The ball of soil and roots will then leave the pot. Lay the plant on its side, and with a fine-pointed stick remove the old drainage, and also all loose mould around the ball until you come to the main roots. If you come across any dead ones cut them off. Remove, also, any loose mould from the top of the ball, but otherwise leave the main roots and a fair amount of the old soil between and around them.

If the soil, however, be wet, pasty, and sour to the smell, remove as much of this as possible—or, indeed, all of it in a bad case—cut off all diseased roots, and then wash the remaining roots and soil in tepid water containing a little Condyl's fluid.

Potting.—In repotting bear in mind two main points: Firstly, if a plant is healthy, and has plenty of roots, transfer it to a pot one to two inches larger than its previous one. If unhealthy, with few roots and little old soil, replace in the same sized, or a slightly smaller, pot. It is not wise to over-pot an unhealthy plant. Rather give it as small a pot as its roots can be got into, and with very little new soil. This will encourage the plant to make new roots quickly,

and when plenty have formed, it can be transferred to a larger pot.

With these few preliminary remarks we will proceed to deal with the actual potting. First place a large piece of



ZONAL PELARGONIUM ("Queen of the Whites").

Zonals are excellent plants for growing in sunny windows, or in boxes outside. Very showy summer-flowering plants.

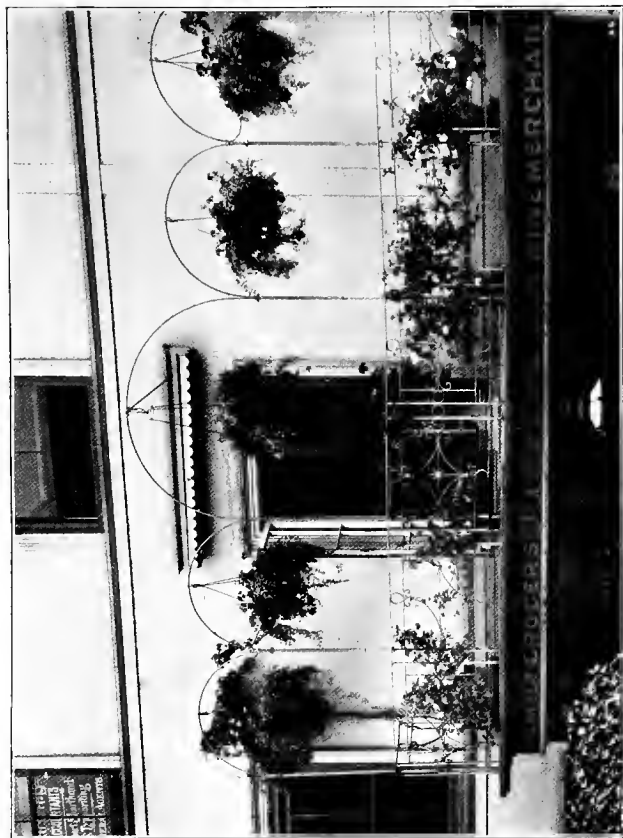
crock, hollow side downwards, over the drainage hole; then two or three larger ones over this, and a layer of smaller

ones on top. Next get some moss or rough fibry soil, and put a layer over the crocks. This ensures good drainage. Now place in an inch or so of compost and press this down firmly. On this place the roots of the plant, and take care that the stem is exactly in the middle. The top of the old ball should be about an inch below the rim; if lower, add more compost underneath. Holding the plant firmly with one hand, proceed to fill in the compost around the roots. Add a little at a time, and press this down firmly with the fingers, or with a piece of flat stick. Do not ram the soil hard, but moderately firm. When the top of the old ball is reached add about half-an-inch of good soil, and press this down evenly and firmly, and smooth off the surface, thus leaving about half-an-inch of space for receiving water.

In the case of bulbs, the *modus operandi* is slightly different. The pot has to be drained, and the drainage covered with moss, as already described. Sufficient compost has then to be added to fill the pot about three-parts full. After pressing this down, the bulbs are placed on top, and sufficient compost added to just cover them.

The above remarks apply to ordinary bulbs. Lilies have to be potted in a slightly different way. Prepare the pot as advised in the first instance. Now, supposing the lilies to be the auratum, speciosum, or longiflorum type, about 2in. of compost should be placed over the drainage, and the bulb put thereon. Under each place a little silver sand, then add enough compost to just cover its point. When the bulbs have made shoots 6in. long add more compost to fill the pot to within 1in. of its rim.

The bulbs just referred to possess two kinds of roots—one set at the base, called basal roots, and the other set, called stem roots, the latter forming on the stem. Thus at first only sufficient compost should be provided to supply the basal roots, the rest being added when the stem ones begin to form. Lilies with basal roots only, as candidum, elegans, and croceum, require to be potted like hyacinths.



A BALOONY GARDEN.

Around the outside of the balcony stout iron arches are fixed, the centres of which support hanging baskets. On the floor of the balcony are large tubs or pots filled with plants.

Vallotas, again, require to be potted in a special manner. Instead of burying the bulb it should only be placed about half-way in the soil.

Orchids like odontoglossums, sophronitis, lycastes, and oncidiums require to be potted as follows: Half-fill the pot with large crocks placed vertically therein. On this place a layer of small crocks, then a mixture of peat, sphagnum, moss, and crocks to fill the pot to just above the rim. Place



HELXINE SOLIEROLI.

A small green-leaved plant with trailing shoots. Suitable for pot culture, or for suspending from the top of a window. See p. 112.

the roots of the orchid on top, and cover with compost, pressing it firmly down. Thus, when the potting is finished, the base of the plant is well above the rim of the pot. The class of orchids just referred to is termed epiphytal, i.e., those which naturally grow on trees. Another type of orchid, the cypripedium, which naturally grows in the ground, requires to be potted in a different way. About 2in. to 3in. of drain-

age has to be added, then a layer of moss, and the roots afterwards planted in a compost of equal parts loam, leaf-mould, peat, charcoal, or small crocks, the base of the plant being kept level with the rims of the pot.

A Final Word.—The reader should bear in mind that clean pots are most essential; that too frequent potting is prejudicial to the plant; that over-potting must be strictly avoided; and that the advice given throughout in this chapter must be strictly followed if success be desired.

CHAPTER III.

FEEDING INDOOR PLANTS.

SOME people have very curious ideas as to what plants really require as food. For example, there is a notion abroad that stale beer, cold tea and coffee, wine, whisky, rum, bullock's blood, and even castor-oil, are suitable materials or liquids to apply to plants. Never was a greater mistake made. None of these things are of the slightest benefit to the plants, and if applied they will in a short time render the plants sickly. These substances clog the pores of the soil with stagnant, effete matter, exclude air, and in time kill the roots. A plant to grow healthily requires a simple dietary, good wholesome soil, and suitable water, with an occasional dose of manure.

When Plants are Benefited by Food.—It is only when a plant is in good health that it can utilise to advantage additional food to that contained in the soil. The plant must be furnished with plenty of healthy roots, and



ARUM OR CALLA LILIES.

Richardia aethiopica is an excellent plant for indoor culture. Bears white flowers in spring, and is easily grown.

not have been recently repotted. In other words, it must be well rooted, and have healthy foliage. Plants like aspidistras, aralias, and palms that have been for a year or more in the same pot, and are healthy, would be greatly benefited by extra food.

Plants, on the other hand, that have sickly foliage and few roots, can derive no benefit from additional food; in fact, to apply it would only hasten their death. Slow-growing plants like cacti, orchids, and many ferns thrive best without any food beyond the slight amount derived from the water supplied. Apply extra foods, then, only to healthy plants, and chiefly to those that make robust growth.

What Foods to Apply.—All seedsmen or florists supply plant foods in packets or tins that are specially suited for indoor plants. Either of these can be used at the rate of a teaspoonful to each gallon of water. Stir well in the water used for immersing the roots. Where there are only one or two plants that require feeding a good plan is to sprinkle the manure on the surface of the soil directly the plant is removed from the water. The moist soil soon dissolves the manure, and the solvent portions gradually sink to the roots. Apply half-a-teaspoonful to a 4in. or 6in., and a teaspoonful to an 8in. or 10in. pot. Apply once a fortnight in summer and once a month at other periods.

Liquid Soot Water.—Soot water is a splendid fertiliser for foliage plants and ferns. Tie a quart of soot in a small coarse bag, and enclose a piece of iron or stone to help make the bag sink in the water. Put this in a three-gallon pail for a week, then use the liquor. Fill the pail again with water, and let the soot soak another week, then use.

A peck of horse droppings and a peck of soot mixed, placed in a bag, and soaked in a 30-gallon cask of water, will make a splendid fertiliser. Use one quart of this liquor to three of water for watering. When empty refill the tub with



A FLORIFEROUS WINDOW BOX.

A scheme in white and pink. In front are pink ivy-leaved pelargoniums and white marguerites behind.

water, and use the liquor diluted with half the quantity of water.

Poultry or pigeon dung may be used in place of the horse droppings, if preferred.

We may here add that the liquor from the soot and manure has an unpleasant smell; whereas, in the case of the packet manures, there is little or no smell.

CHAPTER IV.

HEALTH OF PLANTS.

If the hints given in the various chapters on watering, feeding, etc., be strictly carried out there will not be much difficulty experienced in keeping indoor plants in good health. However, there are a few points upon which we must offer a word or two of caution and advice.

Sickly Plants.—If you have a sickly palm, aspidistra, or fern, disabuse your mind of the idea that a dose of manure will restore it to health. To give manure in such a case would only tend to shorten the life of the plant. Valuable plants like palms and aspidistras really want to be placed in a plant hospital for a few months if they are not in good health. The hospital here referred to is a nurseryman's hothouse. In genial warmth and a moist atmosphere, and with its roots replaced in fresh, sweet compost, there is a possible chance of a sickly plant recovering in a few months; but the possibility of its doing so is very remote if kept in a room.

When the leaves of aralias and indiarubber plants fall off or turn pale, there is generally something amiss with the

roots, and the advice of an expert should be sought to determine the cause and the remedy, if any.

In the case of common plants which can be purchased for a few pence, it is better to at once discard the sickly plant and buy a fresh one. Once a plant becomes very sickly no skill in the world can save it.

Treatment of Sickly Plants.—If the foliage becomes unhealthy, spotted, or brown at the tips, turn the plant carefully out of its pot. If the soil be wet and pasty, and the roots dark and decayed, carefully remove all the sour mould and cut off any dead roots; then wash the remainder in tepid water to which a few drops of Condyl's fluid have been added. Next get a perfectly clean pot, just large enough to take the roots, put in drainage as advised in the chapter on "Potting," and repot in fresh compost. Very great care will be required in watering, giving a fresh supply only when the soil really needs it. The plant, moreover, must be kept free from draughts, and not too freely exposed to the sun. As we said before, the plants ought really to be placed in a hothouse for a time.

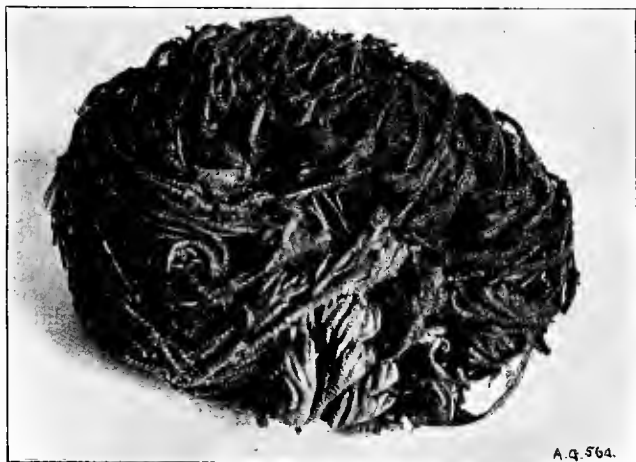
Where the tips of the leaves of aspidistras and palms turn brown, cut these off with a keen pair of scissors. This may stop the decay spreading, but, of course, the cut leaves will not grow out again to their original shape.

Where the leaves of palms have a pale hue, put a crystal or two of sulphate of iron on the soil, and allow this to gradually dissolve; it will then turn the foliage to a darker tint.

Cleansing the Foliage.—Cleanliness of the foliage is a matter of vital importance in regard to the health of the plants. Every leaf contains over 100,000 tiny openings (stomata) to the square inch, and through these the plants obtain carbonic acid from the air, and throw off superfluous moisture. These openings are practically the lungs of the plants. Now, if these are choked by the accumulation of dust the plant must, of necessity, become unhealthy. A

strict point should, therefore, be made to keep the leaves of all indoor plants perfectly clean.

Large-leaved plants, like aspidistras, palms, etc., should have their leaves carefully sponged with soapy water, or milk and water, at least once a week. Use a soft piece of sponge quite free from grit. The latter precaution is most essential, as grit is apt to scratch and split the leaves. The sponging, too, should be very lightly done.



RESURRECTION PLANT (*Selaginella lepidophylla*).

A mossy plant imported in a dry state which possesses the property of reviving when immersed in water.

Ferns are best cleansed by grasping the pot and top of the soil in the hands, inverting the plant, and dipping the fronds in the water.

Some people use oily rags to cleanse the leaves. While this imparts a bright, shining appearance to them, it also at the same time runs the risk of injuring the delicate cuticle of the leaf.

It is a good plan to stand indoor plants out of doors during a shower for a short time. Rain cleanses and greatly refreshes the foliage.

Other Important Considerations.—Apart from cleanliness, there are other weighty points to be considered.

1. Plants must not be placed in draughty positions.
2. Light and sunshine are essential for all kinds of flowering plants, but palms, ferns, and foliage plants may be grown in less light positions.
3. Few plants thrive healthily for long in rooms in which gas is largely used as an illuminant. An exception may be made in the case of the aspidistra.
4. The exterior of the pots should be scrubbed clean at least once a month.
5. Plants should never be constantly stood in saucers of water. Water prevents air entering through the drainage hole, and renders the lower soil stagnant and sour, and injures the roots. Use saucers only to collect superfluous water.
6. Never permit insects to attack the foliage of plants. Promptly eradicate them.

Treatment of Frozen Plants.—Should an indoor plant have the misfortune to become frozen remove it at once to a dark cellar or cupboard, and immediately spray it with *cold* water. Leave it in the dark for several hours, by which time the leaves, etc., will have thawed, when it may be removed into the room. Never place a frozen plant in a warm room, or sprinkle it with warm water. If you do, the frozen parts will not recover.

Protecting Plants in Severe Weather.—Plants grown close to windows may be protected from cold by the simple device of placing a few sheets of newspaper between the window and plants. Paper is a non-conductor of cold and heat, and even a single sheet will keep out several

degrees of frost. In very severe weather it is a wise precaution to remove the plants into the centre of the room.

To protect plants from dust cover them last thing at night with sheets of paper or cloths, and remove the latter after the morning dusting and cleaning has been done.

CHAPTER V.

PROPAGATION.

INDOOR and window gardeners may derive a good deal of pleasure from practising the art of rearing plants from seed or increasing the number of a favourite plant by means of cuttings, etc. As a guide to the inexperienced in this art we will therefore deal with the various methods of rearing plants as practised by skilled gardeners.

Seeds.—Rearing plants from seed is a most interesting process.

The seeds may be sown in pots, pans, or shallow boxes, such as a fig or chocolate box, for example. In the case of a pot, one 6in. wide is the best size. Half-fill this with crocks and cover these with a layer of fibry compost or moss. If a pan or box be used put about an inch of crocks in the bottom and a thin layer of moss or fibre thereon. Next prepare a mixture of equal parts loam, leaf-mould, fine charcoal, and sand. Sift this through an $\frac{1}{8}$ in. sieve, so as to get it fairly fine. Place an inch of the coarse siftings in the pot, pan, or box, and then sufficient of the fine soil to fill the receptacles to within half-an-inch of the top. Press the compost down moderately firm by means of the base of a pot or a piece of board. Next, hold the receptacles nearly

but not quite to their tops in a pail of tepid water till the compost is moistened, then put aside to drain.

Now sow the seeds thinly on the surface. Very fine seeds like begonias will only require to have a dusting of very fine soil thrown over them; others to have just enough to cover them. Again immerse in water as before to saturate the newly-added compost, taking care the former does not rush over the top.

The pot should be dropped inside a larger one or placed in a box, and a pane of glass put on top to keep the surface moist. The pan or box, if used, should also be covered by a pane of glass. Place a sheet of brown paper over each to exclude light, and stand on a table near a window. Every morning tilt the glass for half an hour to permit foul air to escape.

As soon as the tiny seedlings can be seen spearing through the soil remove the brown paper and expose to the light. If the surface soil looks slightly dry give moisture, as previously described.

Seedlings.—When the seedlings are showing freely, place the pot, pan, or box close to the window. As soon as the third leaf forms, the seedlings are ready to transplant, an operation requiring great care.

Prepare other pans, pots, or boxes, as advised for seeds and moisten the soil in a similar way; then carefully lift the seedlings and replant them one or two inches apart, using a small stick for the purpose. Give water as before, and stand close to a light window, and also shade from bright sunshine.

When three or four leaves form on each the seedlings will be ready for planting separately in small pots. See chapter on "Potting." Seedlings must, directly after making their appearance, be grown in as light a position as possible.

Cuttings.—There are two chief types of cuttings, soft-wooded (such as geranium or fuchsia) and hard-wooded (such as myrtle or oleander). Soft-wooded cuttings should be prepared

from shoots 2in. to 3in. or 4in. long. Cut the base off close to a joint, and remove the lower pair of leaves. The cutting is now ready for insertion. Hard-wooded cuttings may be prepared in the same way, or may consist of small shoots pulled off the main branch. In this case the cutting is said to have a "heel," or piece of old wood attached. It is only necessary in this case to cut off the jagged ends.

The next thing is to insert the cuttings. They may be inserted singly in a 2in. pot, or three or more in a 3in. pot.



RESURRECTION PLANT.

The plant figured on p. 143, showing the expansion of its foliage after immersion.
The plant is lifeless. See notes on p. 116.

Put a few crocks in the pot, then a layer of fibry soil, and fill up with a compost of equal parts loam, leaf-mould, and sand, finishing off with a thin layer of sand. Press it in firmly. With the blunt end of a cedar pencil make a hole one inch deep in the centre of the 2in., or two or three holes of similar depth around the side of a 3in., pot, insert the

cutting, pressing it firmly into the hole, and then making the compost firm around it. Moisten the soil as advised for watering seeds.

The pots should either be stood in larger ones, with a pane of glass on top, or be placed in a box covered with glass. Shade the cuttings from sun, and give them a gentle dewing over with water from a sprayer morning and evening. Do not give much air at first, but when it is seen by the firmness of the leaves that root action has begun, then give more air and water. As soon as well rooted, in four to eight weeks after insertion, transfer to larger pots.

Cuttings of myrtle, oleander, rose, and tradescantia will root just as freely inserted in soda-water bottles filled with water and suspended close to a sunny window. Put a lump of charcoal in the water to keep it sweet. When the cutting is well rooted carefully withdraw it from the bottle and plant in a small pot.

Stem-rooting.—When an indiarubber plant, aralia, or araucaria has grown too tall for its position it is possible to easily induce the top to form roots, and make a nice dwarf, independent plant. The method in question is called stem-rooting.

To carry this operation out, provide a soft 3in. flower pot sawn in halves, a compost of equal parts loam, leaf-mould, and charcoal, some copper wire, and three bamboo or other flower sticks. The first step is to cut the stem of the plant half-way through, then split it upwards for two inches, and insert a pebble in the cleft to keep it open. The next process is to place the two halves of the pot around the cleft, bind these together with copper wire, and then insert three stakes in the large pot, to secure the parts firmly in position. Three strands of wire or twine have also to be connected with the pot, and their ends fixed to the stem higher up. Care should be taken to see that the cleft is about midway in the pot. Fill the pot with the prepared compost, and press it in moderately firm.

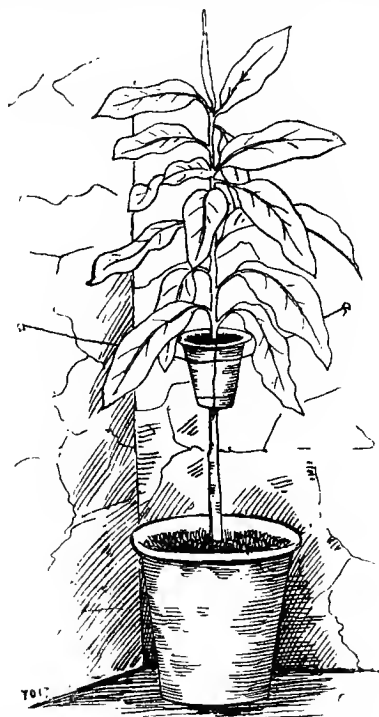
Nothing now remains but to keep the soil moist, and to



A CHARMING WINDOW DECORATION.

The plants consist mainly of Japanese maples, a palm (*Phoenix rupicola*), *Nephrolepis toledoides* fern, and *Asparagus Sprengerii*. A distinctly artistic arrangement.

wait patiently for a month or two for roots to form. At the end of two months carefully draw a little soil from it to ascertain if roots are forming. In any case replace the soil. If roots are forming cut a notch in the stem close to



MODE OF STEM-ROOTING AN INDIA-RUBBER
PLANT.

the bottom of the pot. A fortnight later cut the notch still deeper, a fortnight later deeper still, and a few weeks later cut the stem right through, remove the pot, and carefully place the new roots and soil in a 6in. pot. Keep

away from the sun, and water very carefully for the first month or so. In due course the plant will be established, and the old stump can be thrown away or grown on to make a larger plant.

The illustration given herewith shows how the thing is done. A bandage of fresh moss gathered from a moist bank or wood may be tied around the cleft in place of the pot. This must be kept constantly moist, then eventually roots will form in the moss, when the top can be severed and treated as just advised.

Division.—This is a simple method of propagation.



SECTION OF POT SHOWING DETAILS.

REFERENCES.—a, flower pot; b, drainage; c, soil; d, ringed and slit stem; opened by insertion of small stone; e, main stem of plant.

Aspidistras, ferns, etc., are readily increased by pulling or cutting the root asunder into two or more parts. This is best done in March. The portions divided require to be planted separately in small pots till well rooted, and then transferred to a larger size.

Offsets.—Plants like *vallotas* produce small bulbs at the sides of the parent ones, and others produce tiny plantlets on their trailing stems, as *Saxifraga sarmentosa*, and

others on their flower stems, like *Anthericum variegatum*. These simply require to be removed from the parent plant and replanted in small pots to root, and eventually make plants. Spring is a good time for doing this.

Leaf Cuttings.—*Begonia Rex* may be increased by taking off a large leaf, turning it over, cutting through the main ribs at their junctions, and then laying the leaf under-side downwards on the surface of sandy soil in a shallow box or pan. Peg the leaf here and there with a short hairpin. In a few months a tiny plant will appear where the ribs were severed, and when this attains a fair size each little plant can be placed in a small pot.

Cacti and Succulent Cuttings.—Cacti may be increased by cuttings of the fleshy stems, 2in. or 3in. long, inserted singly in 2in. or 3in. pots filled with a compost of equal parts loam, sand, and pounded brick rubble or old mortar. Some kinds, too, may be increased by little offsets growing on or at the base of the parent plants. Succulent plants, as *echeverias*, are readily increased by dibbling the stem end of the leaves slightly in above compost.

CHAPTER VI.

PESTS AND AILMENTS.

WHERE plants are properly cared for, pests and diseases give very little trouble so far as those grown indoors and in boxes, balconies, and verandahs are concerned. Strict cleanliness and thorough cultivation, based on the advice given in preceding chapters, will maintain plants in good health, and secure them from injury by the few pests likely to make their appearance.

However, it is necessary we should describe the chief

enemies of room and window plants, and give suitable remedies for their prevention or eradication in case the reader should have the misfortune to need the information.

Greenfly.—Greenfly, or aphides, are the commonest and most prevalent of insect pests likely to attack room and window plants. They are small green insects, furnished with a beak, by means of which they puncture the epidermis of a leaf or shoot, and suck out the sap in the cells. Thus they not only rob the plant of valuable food, but also seriously rupture its tissues and cripple its growth. Moreover, the aphides deposit a glutinous film of secretion on the surface of leaf or stem, and seal the stomato or breathing pores, and so do still further injury to the plant.

As aphides possess marvellous powers of fecundity, they speedily multiply if allowed to remain on a plant, and commit very serious mischief.

REMEDIES.—Where only one or two aphides are seen on a shoot the simplest way of dispatching them is by crushing the insects between the finger and thumb. Where numerous, lay the plant on its side, and, by means of an "Abol" syringe, spray the foliage thoroughly with soapy water, or, better still, with "Abol" insecticide.

Those who cannot afford the luxury of a syringe should buy one of the small sprayers used by hairdressers, and use this for applying the liquid to the foliage.

Smokers may make their own insecticide by steeping cigar ends or a little shag tobacco in warm water, and then decanting the liquor into the sprayer.

Worms.—Occasionally a worm finds its way into the soil of a pot, and in the course of its tunnelling disturbs the roots, and also renders the soil light and spongy. Worms do not eat the roots of plants: they feed on decaying substances in the soil.

REMEDIES.—Carefully turn the plant out of its pot and examine the exterior of the ball of soil, when, as a rule, the worm can be seen and easily extracted. If it cannot be seen

add a teaspoonful of carbonate of ammonia ("smelling salts") to a gallon of tepid water, and saturate the soil with this. The worm will then soon wriggle to the surface, when it can be destroyed.

Scale Insects.—Palms and foliage plants, including ferns, are liable to be infested with small brown or light-coloured insects, which fix themselves securely to the leaves.



ASPIDISTRA IN FLOWER.

The curiously formed dull-looking buds shown at the base of the leaf stems are the flowers. These, however, possess no attraction and should be removed.

or fronds, or stems, and by means of a powerful beak suck out the sap from the cells. It is only the young insects which travel; the mature ones, or those which are generally seen, being fixed to the leaf or stem for the remainder of their lives.

REMEDIES.—Fern fronds badly infested should be cut off and burnt, as it is impossible to get rid of the insects without seriously injuring the frond. Where only one or

two are on a frond detach them by means of a pointed stick, and sponge the parts with an insecticide.

Palms infested with scale insects must be frequently sponged with an insecticide, so as to, in time, poison the surface of the leaf and kill the insects.

Oleanders and foliage plants infested with larger scale insects should be carefully gone over with an old tooth brush, followed by a sponging with an insecticide, such as Gishurst compound, obtainable at any florists.

Thrips.—Minute flea-like insects of a dark colour, which infest the undersides of the leaves of azaleas and fuchsias, and suck out the sap, causing the epidermis to assume a pale colour, and the leaves eventually to fall off. Their larvæ, small whitish insects, also do a similar injury to the foliage.

REMEDY.—Spray the foliage, as advised for greenfly, or aphides.

Red Spider.—A microscopic mite, hardly visible to the naked eye, which lives in colonies protected by a very fine web on the surface of the leaves. The mites suck out the sap, and cause the leaves to turn a pale colour and become sickly.

REMEDY.—Red Spider dislikes moisture; hence, if plants are sprayed occasionally with water it cannot survive.

Brown Leaf-tips.—The ends of palm and aspidistra leaves sometimes turn brown. This is due primarily to insufficient water at the roots. When the latter fail to get enough water to keep the cells charged with moisture, they lose the very infinitesimal quantity they contain by transpiration; consequently, shrivelling of the tissues follows, and moisture cannot again pass into them, the result being death of the affected parts.

REMEDY.—The only remedy is to cut off the dead or brown points with a sharp pair of scissors. Trim off neatly, then the edges of the wounds will heal. To prevent



AN ALPINE AURICULA.

Auriculas do well in pots inside, or in boxes outside. The Alpine type is the best for window cultivation.

a similar injury always see that the soil is kept uniformly moist.

Split Leaves.—*Aspidistras* and other foliage plants occasionally have their leaves split. This is due to placing too much pressure on the leaf when sponging or dusting. Great care should be taken to lay the leaves perfectly flat on the left hand, and not to press too heavily with the sponge or duster in the other.

Brown Spots in Leaves.—These are caused by a fungoid disease called the Shot-hole fungus. The fungus attacks the cell tissues, and causes them to die, hence brown spots form, these in time falling out and leaving holes. Plants that are properly grown and kept clean rarely fall a victim to this disease.

Leaves Turning Brown.—When the leaves of *aspidistras*, palms, aralias, and indiarubber plants turn brown or yellow this is due to defective root action, the result of a sour soil and diseased roots. See remarks in Chapter IV., p. 141, for further details.





Part IV.—WALL GARDENING.

CHAPTER I.

CLIMBERS ON HOUSE WALLS.

LET us explain at once that by the term "wall gardening" we mean, for the purposes of this volume, the clothing of the house walls with suitable creepers, so as to make the home as beautiful and interesting as possible. It is just as essential to see that the walls of the home are adorned with attractive vegetation as it is the window-sills and balconies. At any rate, such is our opinion, and we purpose therefore to devote a chapter or so to the subject in this work.

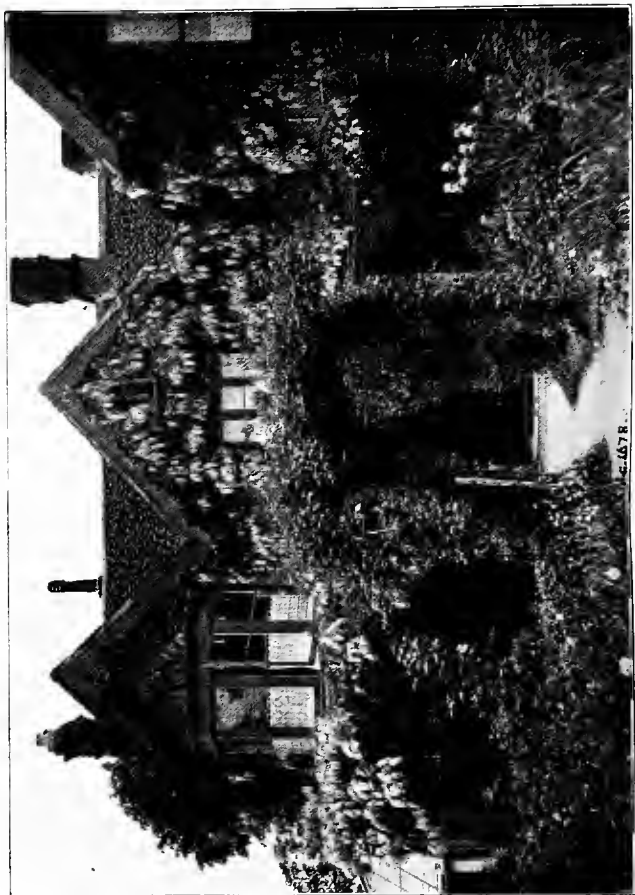
A Popular Fallacy.—There are misguided folk who believe in the theory that climbers and creepers injure the walls of houses and buildings. We entertain the opposite opinion. We will, however, admit frankly that ivy and Virginian creeper, if allowed to grow wildly, with long shoots swaying about, do very often loosen the mortar in the joints, and in that way inflict injury upon the walls. But where creepers are properly looked after they certainly do no harm whatever to them; on the contrary, they do good by keeping them dry and warm. Another way in which climbers like the Virginian creeper may do possible harm if not kept under control is the unfortunate habit the shoots

have of insinuating themselves into the water-spouts, and thus preventing the rainwater flowing freely to the drains. Moreover, the roots occasionally find their way into drains and impede the passage of water. In both cases the difficulty is due entirely to want of proper attention on the part of the gardener or owner. If climbers are properly cared for they will add considerably to the attractiveness and comfort of the home, and afford a good deal of pleasure to the owner.

The Question of Aspect.—To ensure success in the beautification of the walls of the home with climbers, special attention must be paid to the selection of kinds suited to the various aspects. Some kinds, for example, will do better on a wall facing east or north than on one facing west or south, and so on. To enable the reader to select the right kinds for the various aspects, we give in the next chapter a list of suitable deciduous and evergreen climbers.

Walls in Relation to Climbers.—Walls constructed of bricks or stone are admirably adapted to the growth of climbers, more especially those of a clinging nature. Those made of concrete, or faced with cement, or coated with paint, are not adapted for clinging creepers, because of the difficulty of the suckers attaching themselves to the fabric. Moreover, it is also difficult in the case of non-clinging kinds to secure the shoots to such walls, as it is impossible to drive in the necessary nails for the purpose. In such a case it is necessary, if climbers are to be grown successfully, to fix up wooden or wire trellises for supporting the shoots. Another point that demands careful consideration in the choice of climbers is the selection of kinds that will harmonise with the colour of the walls. Thus, supposing the wall to be red, one should avoid planting yellow, violet, lilac, or purple-coloured climbers thereon. If the wall be white, then purple, lilac, lavender, or yellow would be appropriate colours to choose for its decoration.

Soil.—Climbers, to do really well, must be planted in



[Photo : Oliver Goldsmith.

HOUSE FRONT CLOTHED WITH WISTARIA AND OTHER CREEPERS.

It must be clearly admitted that creepers like the Wistaria add greatly to the charm of the exterior of a house. A better illustration of the value of creepers for decorating the exterior of a house it would be difficult to find.

suitable soil. For roses and ordinary creepers good average garden soil, plentifully mixed with well-rotted manure, will suffice, but for choice kinds a special compost will be desirable. The nature of this will be explained in connection with each kind in the lists given at the end. For each plant a bed at least a yard square must be prepared, and the soil should be dug to the depth of about 2ft. Climbers may be grown in tubs or boxes 2ft. square, as advised for balconies, but they will not live so long or give such good satisfaction as those planted in beds.

Planting.—The best time to do this is autumn, but where the plants are procured in pots planting may be done at any period of the year. Pot plants should have their roots soaked in a pail of water before planting, to make sure of their being thoroughly moist. Turn the plant afterwards out of its pot, remove the drainage, and slightly loosen the soil around the ball; then plant firmly in the new soil and give a good watering.

Feeding and Watering.—When climbers have been established a year they may be given weak manure water once a month during the summer. This advice applies specially to roses and clematises. Do not give manure to sickly plants; it will do them more harm than good. Owing to the roots growing so near to the walls they require frequent watering during the summer. It will also greatly refresh creepers grown on walls if they are sprinkled on the evenings of hot days with water.

Pruning.—Special attention must be paid to this matter. Ivies should be trimmed annually in April, cutting away then all the old leaves with a pair of shears. The wall will look bare for a few weeks, but eventually a dense carpeting of young fresh foliage will appear. The annual trimming enables birds to catch insect pests and snails hiding among the stems, and prevents sparrows building their nests among the foliage.

Clematises require careful pruning in February. C. mon-

tana only requires dead wood to be removed. *C. Jackmanii* should have its previous year's growth shortened to 6in. from its base. Those belonging to the lanuginosa type, as *Lady Caroline Nevill*; the patens type, like *Lady Londesborough*; and the Florida section, as *Duchess of Edinburgh*, only require weak growths to be removed, and the dead tips of the other shoots cut off.

In the case of jasmines, cut away the shoots that have flowered of *J. nudiflorum* early in March, and simply thin out the weak growths of *J. officinale* in February. Treat honeysuckles similarly.

Passion flowers should be pruned in February, then cutting all weak growths and shortening the others to 6in. from their base. *Wistarias* merely require to have their weak shoots shortened to two eyes in February.

The Evergreen Firethorn should be pruned in June, then shortening those shoots bearing no flowers to 2in., and reserving those intact that show signs of fruiting. The Japanese Quince should have the tips cut off its main shoots, and all small or side shoots shortened to an inch in December.

Roses grown against walls should be pruned in March. Thin out weakly, sickly, or dead growths, and shorten other growths about one-fourth. In the case of the *Banksian* roses merely cut away the strong young growths that issue from the base, and retain the older twiggy growths.

Training.—All climbers for the first year or so require to have their shoots trained to the wall by means of shreds and nails. Shreds may be made of cloth strips $\frac{1}{2}$ in. wide and 3in. long. We, however, prefer to use the medicated shreds sold by all seedsmen, because they do not harbour the presence of insects like the cloth ones. Special cast-iron wall nails may also be obtained from the same source. After the first year self-clinging climbers will usually take care of themselves, but the others must be regularly trained as growth proceeds.

Pests.—Aphides, or greenfly, attack roses, ivies, and

other climbers in summer. To get rid of them spray with an insecticide. The same remarks apply to caterpillars. Mildew also attacks roses in spring and summer. The simplest remedy is to dust the foliage with flowers of sulphur.

CHAPTER II.

CLIMBERS AND SHRUBS FOR WALLS.

We will now give the names of climbers adapted for walls of various aspects, together with brief descriptions of each:

NORTH WALLS.

Those described below are suitable for a north, north-east, or a north-west aspect:

Ivies.—All the green-leaved sorts are suitable for this aspect. The best forms are *Canariensis* (Irish Ivy), *Lucida*, *Palmata*, *Digitata*, *Doneraulense*, and *Sagittæfolia*. Self-clinging. Soil: Ordinary rich, with old mortar. Plant 1ft. apart to cover wall quickly. Evergreen.

Tropæolum speciosum (Flame Flower).—A showy climber bearing brilliant scarlet and yellow flowers in summer. Growth twining. A trellis required to support the annual shoots. Plant the fleshy roots 6in. deep in March, in a bed composed of two parts loam and one of equal proportions of peat, leaf-mould, and sand. Requires plenty of moisture. Deciduous.

Calycanthus occidentalis (Western Allspice).—A deciduous shrub, bearing large, fragrant, maroon-coloured flowers freely throughout the summer. Height, 8ft. Ordinary soil. Plant in autumn.

Japanese Quince (*Pyrus japonica*).—A deciduous shrub yielding bright scarlet or crimson blossoms freely in early spring. There is a double variety of it, named *cardinalis*; also a white (*nivalis*), a flesh-coloured one (*carnea*), a rose-coloured one, named *rosea*. The main shoots should be trained to the wall, and the laterals shortened to an inch in December. Ordinary soil. Plant in autumn.

Virginian Creeper (*Vitis quinquefolia*).—Formerly known as *Ampelopsis hederacea*. A vigorous-growing, self-clinging climber. Leaves green, changing to red, etc., in autumn. Deciduous. Ordinary soil. Plant in autumn or spring.

Roses.—The following roses do well on a north aspect: Ard's Rover, crimson; Bennett's Seedling, white; Bouquet d'Or, yellow; Félicité et Perpetue, white; Gloire de Dijon, buff; Reine Marie Henriette, red; René André, yellow and red. Good, rich soil. Plant in autumn or spring.

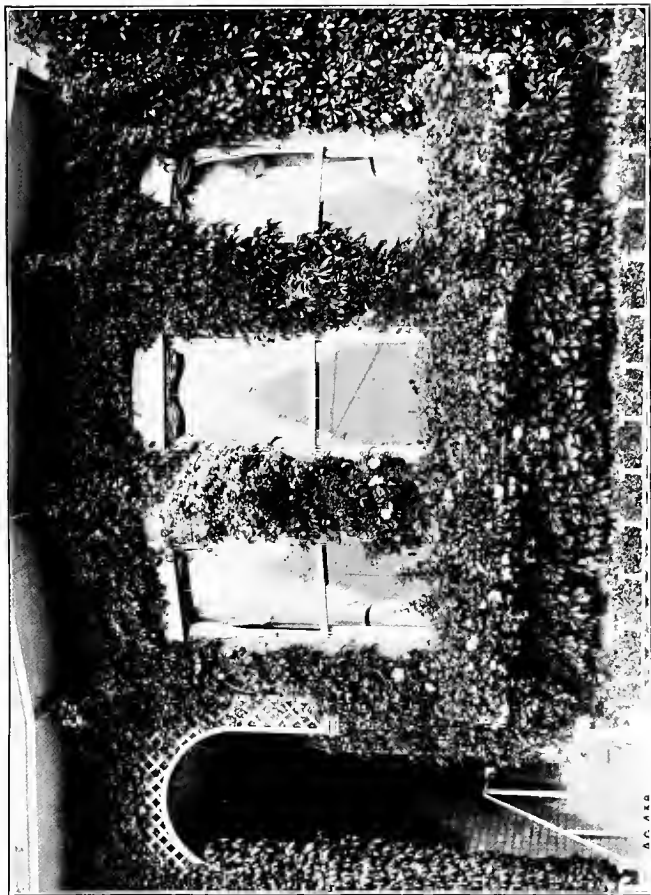
EAST WALLS.

Any of the foregoing are suitable for this aspect also. The following additional ones may be grown:

Crataegus pyracantha (Evergreen Firethorn).—An evergreen shrub, bearing orange-red berries in autumn and winter. Very showy. The variety *Lelandi* is a neater-growing kind. Ordinary soil. Plant in autumn.

Clematis.—*Jackmanii*, purple, is the best sort for this aspect. Flowers in summer. Soil, two parts of loam and one of equal proportions of decayed manure and leaf-mould. Deciduous. Plant in autumn or in March.

Roses.—In addition to those advised for a north aspect the following sorts may be grown: Climbing Mrs. W. J. Grant, pink; Bouquet d'Or, yellow; Madame Alfred Carrière, white; and Climbing Caroline Testout, pink. Plant in autumn or early spring.



A SUBURBAN WINDOW GARDEN.

The walls and pillars are covered with creepers and the boxes planted with ivy-leaved pelargoniums, fuchsias, etc.

WEST WALLS.

Akebia quinata.—Evergreen twiner; requires a trellis. Flowers, purple, fragrant at night; borne in May. Soil, equal parts loam and leaf-mould. Plant in autumn.

Aristolochia Sipho (Dutchman's Pipe).—Deciduous climber, with large green leaves and yellowish flowers of peculiar shape. Rapid grower. Ordinary soil. A vigorous grower. Plant in autumn.

Clematis.—Jackmanii, purple; Lady Londesborough, blush; Miss Bateman, white; Beauty of Worcester, violet; Lady Caroline Nevill, blush and mauve; Duchess of Edinburgh, white, double, fragrant; and Mrs. James Bateman, lavender. Soil, two parts loam and one of equal proportions of decayed manure and leaf-mould. Plant autumn or spring.

Forsythia (Golden Bell).—Two species—*F. suspensa* and *F. viridissima*—do well trained against these walls. Flowers yellow, borne in spring. Deciduous. Requires to be trained. Ordinary soil. Plant in autumn.

Ivies.—The variegated sorts do well on a west wall. *Canariensis foliis argenteis*, green and white; *marginata*, green and white; *marginata aurea*, green and yellow; and *variegata*, green and creamy-white, are good kinds. Do best in a not over-rich soil.

Jasminum (Jasmine).—*J. nudiflorum*, bearing yellow, fragrant flowers in winter; and *J. officinale*, white, fragrant, summer, are two very interesting climbers for a west wall. Shoots require training. Ordinary soil. Plant in autumn.

Lonicera (Honeysuckle).—The Goat-leaved Honeysuckle (*L. Caprifolium*) grows 10ft. to 15ft. high, bears yellow, fragrant flowers in early summer, and is a charming deciduous climber to grow on a trellis; or, failing the latter, trained to the wall. *L. japonica aureo-reticulata*, is another pretty species, with golden netted foliage. Ordinary soil. Plant in autumn.

Pyrus Maulei (Maule's Japanese Quince).—A deciduous shrub growing 4ft. high and bearing red flowers in April. Very showy. Ordinary soil. Plant in autumn.

Roses.—Any of those named for a north and east aspect are equally suitable for a west one. In addition to these the following may be grown: Billiard et Barré, golden-yellow; Longworth Rambler, crimson; W. A. Richardson, orange; Zephirine Drouhin, carmine-pink; Plant autumn or spring.

Vitis inconstans.—This, formerly known as *Ampelopsis Veitchii* is a small-leaved, self-clinging creeper, the foliage of which assumes a lovely rich tint in autumn. A splendid kind for quickly covering a wall. Deciduous. Ordinary soil. Plant in autumn or spring.

SOUTH WALLS.

On these it is possible to grow a large variety of very pretty climbers or shrubs, as the list below will testify.

Azara microphylla.—An evergreen shrub, with glossy, fern-like foliage. Grows about 10ft. high. Requires to be trained to the wall. Soil, two parts loam and one of leaf-mould. Plant in autumn.

Berberidopsis corallina (Coral Barberry).—An evergreen climber with glossy, prickly foliage and crimson flowers borne in summer. Very attractive. Soil, loam and leaf-mould. Plant in autumn.

Buddleia variabilis Veitchiana.—A more or less evergreen shrub, growing 8 to 10ft. high, and bearing mauve and orange flowers in huge terminal spikes in summer. Very showy. Good ordinary soil. Plant in autumn.

Calystegia hederacea fl. pl. (Double Ivy-leaved Bindweed) is a herbaceous creeper bearing double rosy-pink flowers in summer. It has fleshy roots; grows about 6ft. high. Should be planted in a narrow bed in ordinary soil, and a trellis must be provided for its shoots to twine around.

Ceanothus (Blue Bush).—*C. azureus* Gloire de Versailles and Veitchianus are blue-flowered deciduous shrubs, blooming in summer, which make very showy wall plants. Height about 10ft. Soil, loam and leaf-mould. Plant in autumn or spring.

Chimonanthus fragrans (Japanese Allspice).—A deliciously fragrant yellow and purple-flowered deciduous shrub which blossoms in winter. Grow in sandy peat, and prune lateral shoots to an inch from their base after flowering. Height, 6ft. Plant in autumn.

Choisya ternata (Mexican Orange Flower).—An evergreen shrub. Flowers white, borne in summer; fragrant. A pretty wall shrub. Height, 6ft. Soil, loam, peat, and leaf-mould. Plant in autumn or spring.

Clematis montana (Mountain Clematis).—A vigorous-growing climber, bearing a profusion of white flowers in May. Requires to be thinly trained to the wall, and to have no pruning except the removal of weak or dead shoots. Marcel Moser, a mauve and red variety of the lanuginosa type, also does well on a south aspect. Those advised for a west will also succeed on a south wall. Plant in autumn or spring.

Eccremocarpus scaber (Chilian Glory Flower).—In warm localities this pretty climber is worth growing. Flowers orange, borne in summer. May be grown as a half-hardy annual where its roots perish in winter. Ordinary soil. Plant in May.

Ercilla volubilis.—An evergreen self-clinging creeper bearing purple flowers in summer. Ordinary soil. Plant in autumn or spring.

Escallonia macrantha (Chilian Gum Box).—An evergreen shrub, growing 6ft. high, and bearing crimson flowers in early summer. Does well near the sea. Ordinary soil. Plant in autumn or spring.



[Photo: Chas. H. Green.

A SIMPLE ROSE-EMBOWERED PORCH.

The porchway portrayed is crowned, so to speak, with a wealth of roses, and forms a very pleasing picture.

Fabiana imbricata (False Heath).—This is an evergreen shrub, growing 3ft. or so high, and bearing white flowers in May. Ordinary soil. Plant in autumn or spring.

Garrya elliptica.—An evergreen shrub, the male form of which bears pale-green, tassel-like catkins in winter, which are exceedingly pretty. Ordinary soil. Plant autumn or spring.

Lycium (Box Thorn).—Deciduous climbers bearing purplish or reddish flowers in summer, succeeded by orange-red berries. Good town climbers. *L. chinense* and *L. halimifolium* are the two species. Ordinary soil.

Magnolia.—*M. conspicua* (Yulan Tree) is a deciduous shrub bearing fragrant white flowers in April, before the leaves appear. *M. grandiflora* is an evergreen species with white fragrant flowers. Compost, two parts of sandy loam and one part of equal proportions of peat and leaf-mould. Train the branches to the wall. No pruning required. Plant in spring.

Myrtus communis (Myrtle).—An old-fashioned evergreen shrub, with fragrant foliage and white flowers. Grow in loam and leaf-mould, and train the shoots to the wall. Plant in spring.

Passiflora cœrulea (Passion Flower).—A blue-flowered deciduous climber which grows and flowers freely in the South. The flowers are succeeded by egg-shaped fruits in autumn. Requires to be trained to the wall. See also remarks on pruning in Chapter II. *Constance Elliot* is a white variety. Ordinary soil. Plant in spring.

Roses.—Banksian roses, yellow and white kinds; Climbing *Devoniensis*, white; *Maréchal Niel*, yellow; *Fortune's Yellow*, yellow; *Francois Crousse*, crimson; *Lamarque*, white and lemon; *Papillon*, pink and white; and *Rêve d'Or*, yellow. Plant in autumn or spring.

Solanum jasminoides (Jasmine, Nightshade).—A

deciduous climber bearing bluish potato-like blossoms in summer. Hardy in the South only. Peaty soil.

Tecoma radicans.—A free-growing evergreen climber, bearing tubular-shaped, reddish-scarlet flowers in summer. Suitable for lofty walls only, and the South and West of England only. Good loamy soil. Plant autumn or spring.

Vitis (Vine).—The Purple-leaved Vine (*Vitis vinifera purpurea*), with purple foliage, is a handsome deciduous climber to grow on a sunny wall. The shoots require to be trained to the wall. Prune away weak shoots, and cut off tips of strong ones in winter. Miller's Burgundy (black) and Royal Muscadine (white) are good sorts of hardy grape vines to grow outdoors. Plant in autumn in good ordinary soil.

Wistaria Chinensis (Chinese Kidney-bean Tree).—This is the well-known wistaria which may frequently be seen growing on old walls, and bearing a profusion of mauve flowers in pendant racemes. Requires to be trained to the wall. Grows very slowly for the first few years. Light, sandy soil. Plant in spring.

PORCHES.

Porches sometimes form a feature of house architecture, and these frequently lend themselves to effective decoration with roses, clematises, and honeysuckles.

Suitable roses for the purpose are free-growing kinds like Crimson and Longworth Ramblers, crimson; Climbing Aimée Vibert, white; Dorothy Perkins, pink; Lady Gay, pink; Blush Rambler, blush; Alister Stella Gray, yellow; and Hia-watha, crimson and white.

Clematises, too, as Jackmanii, purple; Lady Dorothy Nevill, lavender; Duchess of Edinburgh, white; and Montana, white, are very showy climbers for porch decoration.

Honeysuckles and jasmines are also appropriate plants for the same purpose. For sterling beauty and exquisite effect it will, however, be difficult to surpass roses and clematises for porch decoration.



Part V.—FLORAL DECORATION.

By Mrs. FF. A. WOLFE.

CHAPTER I.

INTRODUCTORY REMARKS.

THE decorative use of flowers in the home is a feature of our times. Other periods have realised their value for great and special occasions, as the ancient records prove, with their wreaths of flowers and fruit, garlands and strewn petals, and every succeeding age has used floral decoration in greater or less degree to give a high festal note, or to symbolise in some way the great occasions.

A trace of this symbolism is still with us—white flowers and orange blossoms for a wedding—and they try to revive it in America with their “pink teas” for young girls and “violet lunches,” and in the wholesale sacrifice of “American Beauty” roses that marks the wealthy débutante’s entry into society.

In all this there is nothing new. The value of flowers for great days has never been questioned. But it is left for our times to recognise as equally important their value in the home for every day.

By degrees we have come to understand how largely

flowers have to do with the charm of beautiful rooms, and how dull rooms are beautified and redeemed by their mere presence and scent. Even those who are not true flower lovers have become aware of the difference they make, while others have merely discovered that they were "the fashion," and adopted them accordingly. However it has come about the fact remains that few modern homes are without floral decoration of some kind—foliage plants, flowering plants, "dried things," and cut flowers.

How to employ them to the best advantage, and so double their value and charm, is not always quite so fully understood.

We have certainly improved and enlarged on early Victorian ideals of prim, tight centrepieces and specimen glasses, each with their single bloom. Modern notions of decoration are no longer satisfied with a palm in the corner and an indiarubber plant in the window. Flower-pots are not covered with painted cardboard, or crinkled paper or vases embellished with ribbon bows; dyed pampas-grass and seedy bulrushes are no more.

All this is good, but in the matter of cut flowers there is room for improvement.

CHAPTER II.

FLOWERS IN ROOMS.

FORMERLY certain flowers in limited, established quantities were counted "right" for the drawing-room, and there each vase so filled had its allotted place. For many reasons this arbitrary method was unsatisfactory, but it is not wholly unknown to-day. Its opposite, the careless "natural" method of filling every available vase and bowl with flowers

and leaves in wild profusion, is hardly better. It takes art to produce a "natural" arrangement, just as all good arrangements and combinations take art, and time, and taste, and some thought as well.

The first thought should be: where are flowers most needed or not needed?

It is an open question if they should be in bedrooms. Certainly, they have a wonderful effect in aiding convalescence, and are approved by most doctors for this reason, provided they are removed at night. To a guest-room they give a pleasant welcoming touch; it ought not to look decorated; just a single glass of flowers is enough, and that constantly renewed. Whether they should be in a study or in a work-room depends entirely on the occupant. Sometimes it is wise to admit frankly that they are not wanted—incongruous. Flowers can be. There was once a dentist who was also a rose-grower, and who between-whiles would call attention to the Bride, the Niphetos, the Dean Hole that looked down from the mantelpiece.

Halls and landings often lack colour and interest other than the usual evergreen; and here, when space admits, large groups of showy flowers and foliage are excellent. Branches of copper-beech, with a few pink and crimson pæonies in a tall jar, make a splendid glow of colour in pale, nondescript surroundings; or if it is a dark hall that needs brightening, Globe Thistles (*Echinops ritro*), with the small yellow sun-flowers (*Helianthus*), in a brass pot.

Foliage.—As foliage plays an important part in these large groups, and has many other decorative uses in the home, some suggestions on its employment will not be amiss here.

Beech, for example, copper beech, or boughs in early spring or in autumn, incline to revert to their horizontal position, and need some adjusting to keep them upright. A tall jar tapering to a narrow neck is best, and it is quite worth while to tie the foliage every here and there to a light bamboo rod in the jar. In this way towering, grace-

ful effects are possible, which keep in place and are decorative in themselves without any addition. "Traveller's Joy," or "Old Man's Beard," the Variegated Box Elder (*Acer Negundo variegatum*), almost any foliage can be turned to good account in this way. It only needs a little imagination. Ivy in water is practically everlasting. With an occasional washing to restore its gloss it is a real stand-by in winter. For a landing or passage window an interesting group can be arranged with ivy and tall sprays of Honesty, but this group needs light, or the contrast of the silvery, transparent discs and the dark ivy is lost. This, and all "everlasting" groups of whatever their composition, must be taken to pieces and dusted, and rearranged from time to time, in order to obviate that permanent air which robs all floral decorations of their chief charm. I mean the variety and freshness, the new note, that they bring to our accustomed surroundings.

Whether these large groups be used or not in sitting-rooms depends on the size and character of the room. If it is large and spacious, or sparsely furnished, such arrangements are invaluable. Blue delphiniums, for example, among blue-grey Sea Hollies (*Eryngiums*), or spikes of gladioli—carmine and mauve—with Sea Lavender (*Statice*), according to the room.

Placing the Flowers.—The tone of these important groups should be repeated—at least, not contradicted—by the smaller flower arrangements, and each one of these should be placed with an eye to its surroundings. The curtain, the reflections in mirror or in metal, the bare space of wall that should be broken, the lighting, the bric-a-brac, the foliage plant—all these should be taken into consideration in the placing of the flowers. Of course, this does not mean that there is one place, and one only, for each arrangement. Because a certain tall glass of William Allan Richardson roses has been found admirable on a cream-coloured mantel-shelf, with a brown wall behind, it is not necessary to have these roses there all the summer, even if it were possible. Such lack of imagination is rare, but it is not by any means unknown, and it should be guarded against. To look in-

stinctively on entering a room for orange flowers in one particular spot, and always to find them, in the end defeats its object—charm. The unexpected element in floral decoration is one of its chief joys, and this principle of careful placing should bring it out to the fullest advantage. As an example of placing, take the idea of enlivening a dark corner with flowers. It is fairly common, but not to be commended, all the same. Flowers require light; in a dark room they should be given the best positions; then they seem to attract, to radiate light, and are invaluable. In dark corners they are practically wasted. As an example of placing with regard to foliage plants take a Japanese Aralia (*Fatsia japonica*). It is a useful thing, an aralia, but it tends to “legginess.” A good arrangement of flowers, then, can be placed so as to hide this defect, at the same time to form with the plant's broad leaves an interesting group. How much or how little floral decoration is advisable depends on the room. Ornate rooms, with beautiful furniture and bric-a-brac (china, embroideries, and so on), are more or less complete in themselves; consequently flowers must be added with careful discrimination. Rooms, on the other hand, with no especial beauties of furniture and ornament, depend more or less on the flowers for their adornment. Here, then, more will be used, but not even here with indiscriminate lavishness. Fewer decorations, carefully thought out on the lines just indicated, always tell far better than a profuse display of flowers wherever flowers are possible.

Errors to Avoid.—Small rooms, especially, are best not crowded; even flower-lovers should recognise this. They should see that when every available table and space is cumbered with pots and bowls of flowers that the result is unsatisfactory, æsthetically and otherwise. With risk of upsetting, and with comfort and convenience interfered with, flowers cannot be enjoyed. “Artistic” arrangements are frequently top-heavy, so that a touch sends them over, and brings disgrace on the whole tribe. Further, with such quantities of flowers about, it is hard to keep them all up to the

mark, and the first essential of all flowers indoors is their freshness.

It is important to bear in mind that if fresh, sweet blossoms have a definitely cheering effect on our spirits, and incidentally on our health, that their decaying relics in stale water are a menace to both. Most varieties of such popular cut flowers as roses, poppies, and irises, need constant renewing. As this rearranging and snipping-off is tedious, busy people should choose flowers of lasting qualities for every day. Daffodils and the narcissus family are ideal in this respect; they look well and keep well with the least amount of trouble. The same applies to sweet peas, though they take longer to arrange; and chrysanthemums, asters, and purple Michaelmas daisies are all among the most trustworthy.

Arrangement.—About the actual arranging of the flowers in their glasses it is unwise to accept or to lay down rules. There are none, no matter how “safe,” that may not be flouted by anyone with taste.

It may be “safe” never to mix your flowers, but it is dreadfully limiting. A simple, close bunch of Parma violets is always charming—indeed, in no other way do cut violets look so well as in a mass. But take the same bunch from its glass or white china bowl, and put it in a red lustre bowl, interspersed with the small red ranunculi, standing up from among the violets, and the effect from a decorative point will be doubled and the charm in no wise diminished. Similarly, a crowd of Crimson Rambler roses with pink sweet peas, or gillyflowers and forget-me-nots—to everyone his own selection.

Small flowers generally look best used in quantities; some in a mass, like violets; some in a crowd, like cornflowers, and placed low; the bowl of violets, for instance, would be absurd on the chimney-piece.

“All-round” arrangements, of whatever kind, need quantities of flowers; a hint of “skimpiness” is fatal to their success. They are meant for tables and places where they are looked down on and seen from every side, and a certain

all-round symmetry should be aimed at, and this whether the flowers are to be arranged in a mass or with each springing up lightly on its own stem.

"Flat" groups, with a wall behind, and that face only one way, are less formal; can be made with a mere handful of suitable flowers. Dahlias, lilliums, antirrhinums, aquilegias, any of these. "Flat" groups should certainly be done on the spot, and in the room that they are to adorn; indeed, if possible, all flowers are better done on the spot. It seems troublesome, but it is really well worth while.

It is the nature of flowers, their growth, that best determines their position indoors. Broadly, those of a drooping habit—as clematis—should be allowed to droop; tall-growing kinds should not be cut down to the dimensions of the rose-bowl; and stiff-growing sorts, as the iris, are best fixed upright with glass or leaden holders.

Japanese Methods.—The Japanese, who have made of floral decoration a fine art, use hardly more than three or five blooms, but consider each individual leaf, petal, and stem from all points—balance, shadow, silhouette, and all. Obviously the art of selection and rejection, and the scissors, are important factors in this style of decoration. But there is nothing like it for the iris. A bunch crowded together, besides being ineffective, soon perishes. Like many soft-petalled flowers, these have a curious way of drawing together a day after they are put in water that is ruinous to their beauty. Nasturtiums, for this reason, are troublesome as cut flowers, glorious as they are just at first. Carnations, pinks, and picotees are entirely delightful in the house, but take time to arrange well. They need some stiff, light foliage, in addition to their own greyish leaves, to keep up the heavy heads, and to hide the almost necessary wire-holder. For this nothing answers so well as gypsophila, the white or the pale rose variety, when it can be had.

Colour and Character.—Another point that repays study is the colour, and even in certain circumstances the



A BASKET OF PÆONIES.

The flowers in this case are arranged with their own foliage—an effective combination.

character of flowers with regard to the room they are to adorn. But here, again, especially about so elusive a thing as colour, no hard-and-fast rules can apply. Some blue rooms may be enormously improved by a note of vivid orange or yellow; in others, where purple is the keynote, it may be well to shun the yellow tones, and adopt flowers shading from mauve and pink to crimson. These nice points, however, can only be decided on the spot. It is comfort to remember, too, that flowers are rarely "out of the picture," even if they are not always as well in it as they might be. The majority of rooms, too, are not exacting; all flowers in their seasons can be used with discretion.

Receptions, etc.—This applies to the flowers of every day. For "At homes," receptions, and so on, a regular scheme should be planned and carried out consistently. Receptions need plenty of clear space, and rooms must be decked out with this well in mind. It is grievous to see beautiful plants and flowers crushed and withered. All little flower tables spotted about must be banished, and the floral decorations kept high and back against the walls, and arranged with a view to broad and striking effects. This is best attained by keeping to a definite colour scheme, and by massing and grouping the flowers and plants. Window-ledges can be decorated with safety, and with admirable effect for halls, stairs, and landings; in the reception rooms a long window-ledge banked with flowers is a beautiful feature. There might be a tall group and a couple of smaller arrangements on the mantelpiece of the same tone—not necessarily the same flowers—and in a corner some foliage plant, with growing flowers massed round it.

Character.—Even every day a certain connection is desirable between the glasses and bowls of flowers. No doubt, too, if the room has a character of its own, it is more attractive when the flowers are in keeping. This is not always feasible, but it might, at least, be borne in mind. Thus, a room with Japanese tendencies is better adorned

with chrysanthemums, blackthorn, or *Pyrus japonica*, say, than with the foxgloves and the daisies that go so well in a country cottage. Tulips and the small Persian yellow roses accord well with Oriental possessions; while there are certain fine white-panelled, stately rooms that seem to demand fine delicate blossoms—long trails of orchids, hydrangeas, blue plumbago, and the like, in silver and enamelled vases and bowls. Here decidedly wild flowers would be a little incongruous.

Wild Flowers.—At all times the treatment of wild flowers is difficult—fraught with disappointment to the inexperienced. They are tempting to gather, but without discernment they are gathered in vain. Buttercups lose their fairy gold on the way home; meadow-sweet droops speedily, and will not be revived; and poppies shed their petals even as you gather them. Hawthorn, that looks and smells so delicious in the hedge, is overpowering and untidy indoors; and the splendour of bracken overnight is withered rusty-brown in the morning. Primroses, which the wise country children themselves gather, are amongst the best of all, provided they are tied into neat bunches as you go along, and not dropped all anyhow into the basket. If the pale dog-violet that often grows near them be mingled—leaves, roots, trails, and all, just as it comes up for a touch—and all arranged together in a low, flat vessel, nothing more charming in a simple way could be devised. Primroses tell beautifully in a dark room, almost as if they radiated light.

Bluebells (or wild hyacinths) are lost in dark surroundings. They must be used in quantities, and need some manipulating if they are to look well.

“As like a sky-lit water stood
The bluebells in the azured wood.”

Yet they always lose their glorious blue very quickly. A large blue-and-white china bowl suits them, with a jam pot in the middle, filled, hidden, and surrounded by the flowers in an unbroken blue dome. The same bowl filled with a close

mass of cowslips, with bluebells springing up through them like spray, is a delightful combination. Ox-eye daisies, too, need careful handling. Gathered in handfuls, and thrust artlessly into jars with the meadow-grass still about them, will not do in practice, however ideal it sounds in theory. Considerable trimming is needed, stripping off superfluous leaves and rejecting bad and discoloured flowers. They are strong, coarse-growing flowers, and contrary to the "soft-petalled" kind, stretch out and seem actually to expand in water. Less exclusive than bluebells, they mix cheerfully with other flowers, even with garden flowers—Oriental poppies, for example—but they are very decorative by themselves, and last almost too well. Blackthorn is well worth the trouble entailed in cutting it. If a bough be cut early enough it retains its beauty so long that it might almost be classed with Honesty and Winter Cherry (*Physalis*) among the "dried things." Afterwards it makes a splendid backing for some of the large groups already referred to. Anyone who likes quaint, bizarre effects should save their giant poppy-heads, and when they are quite dry gild them roughly and arrange them in a green and gold Oriental jar, with just a branch of blackthorn. The effect is striking, and, in its way, excellent, although rather barbaric. It would be less excellent in a jar of painted Worcester china—in fact, such a substitute would go far to make the whole thing absurd.

Flower Receptacles.—Flower receptacles always count considerably in the success or failure of floral decoration, and, though most people are aware of this, still there is a natural tendency to use the same things in the same way over and over again. White crockery for the little ferns, the silver bowl for roses, a brass pot or an "art" pot (save the mark!) for the growing things, and green or clear glass for all the rest. This is all right as far as it goes, but it might easily go farther.

Glass, assuming that it is always clean and shining outside and in, is a safe choice and a good one. No one can go far wrong with glass; it suits all the "clean-stemmed"

flowers—as the jonquil family—best of all. Old-fashioned cut-glass finger bowls fitted with glass holders are nice for simple arrangements, where a certain uniformity is wanted. “Opal” glass seems to suit the larger groups, while gilt and ornamented Venetian glass is exquisite for rare exotics, though rather too precious in effect for every day.

The appreciation of silver as a setting for flowers is proved by the popularity of rose bowls and silver vases for wedding presents. The claims of other metals—brass, copper, and pewter—are less generally accepted. This is a pity. There are certain flowers—chrysanthemums, gaillardias, zinnias among them—that never look so well as in brass or copper. Gaillardias run the whole gamut of metallic tones—gold, copper, orange, bronze, brown—and the effect of a crowd in a good-sized brass or shining copper vessel is simply magnificent. But it dominates; other arrangements must be subservient, and in keeping. To a certainty it will drive the pink La France roses, in their silver vases, out of the room!

Pewter especially suits blue flowers; sweet peas in shades of lavender-blue, indigo, and blue-purple are very good in pewter, as are also the bright blue cornflowers. Love-in-a-Mist (*Nigella damascena*) seems just made for it. These are for light, smallish flower-holders. For larger and bolder arrangements long-stemmed pelargoniums—or geraniums, as the popular word has it—in shades of cerise and lilac-rose, look exquisite in pewter. Speaking broadly, pewter is best in white or light rooms; its pale lustre is rather lost in the sombre rooms, where brass and copper tell out so grandly.

All these are more or less naturalistic arrangements; the stiffer flowers are, on the whole, best treated decoratively, and arranged with their own leaves in leaden holders in the manner of the iris, already described. For this there is nothing better than the low, flat vessels of coloured earthenware, such as the Japanese themselves use. All shapes and sizes can be had, and many colours. They are cheap enough to buy, though their value as aids to floral decoration can hardly be over-estimated. Yellow tulips in a blue-grey pot, crimson and scarlet pyrethrums in dull green, white lilliums

in red, these are the merest suggestions, the flowers in season, and the pots will do the rest. White earthenware enjoys a somewhat unaccountable measure of popularity. The finest Staffordshire needs constant washing and polishing, and the poor kinds never look anything but poor. White flowers are best, stocks that have a greenish tinge; white on white is not without its charm.

Ornamental Pots.—The beauty and the decorative uses of bulbs and flowering plants is often marred by a stupid notion that the pot they are in must be hidden at all costs. There is nothing ugly about a flower-pot; on the contrary, its dull red, and the soft greens and ochres that it takes on with time, harmonise so well, and are so natural a setting for flowers, that one is hardly aware of the pot at all. But you cannot fail to be aware of the "art pot"! An azalea is one of the best among indoor plants; it lasts splendidly, and it is a joy all the time. Quite half the joy in it, however, can be spoiled by standing it in a large red "art pot," embossed, scalloped, and patterned after its kind. Hyacinths in spring—even they can be robbed of half their delightfulness; an "art-green" pot will do it. Considering the really good bowls that are made purposely for bulb-growing, and considering the strides that have been made in culture since the "art pot" was invented, it is singular how hard it dies. Good earthenware pots can be had for the flowering plants, too, but a suitable saucer to stand them in is all that is really necessary. Scarlet geraniums—the cottagey kind—a little overgrown and angular, are quaint and decorative on occasion. In a room or hall with dull walls and a good deal of dark woodwork about, they supply, as little else can, a note of pure vivid colour that may be valuable.

It is important not to overload the growing things indoors. Where plants—say, chrysanthemums—are grown purposely for the house, they are often used so liberally that the rooms they are meant to adorn are turned into mere "show-rooms." This is floral decoration gone mad.

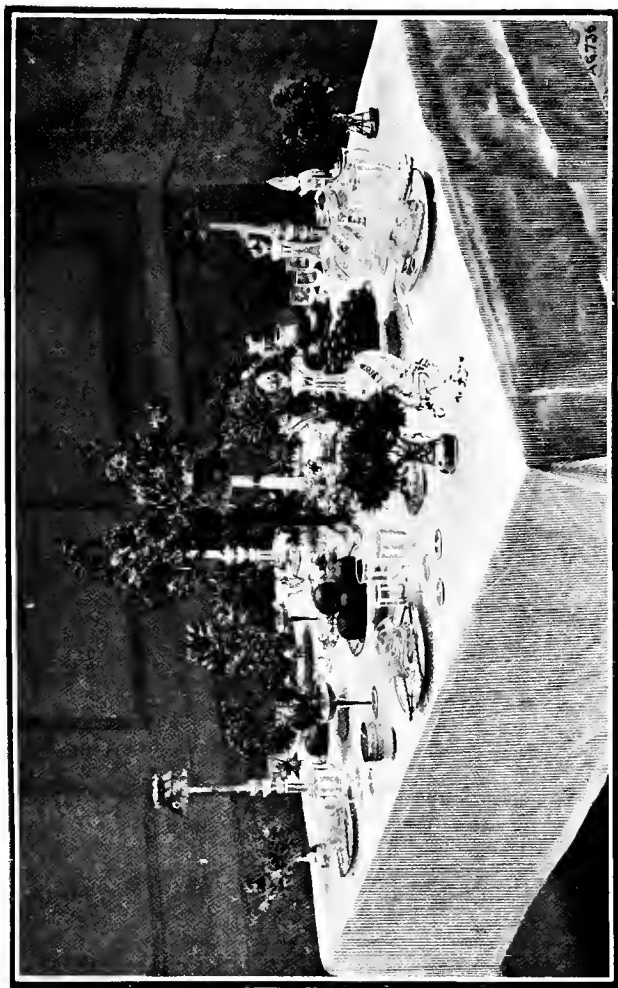
CHAPTER III.

TABLE DECORATION.

It is said that table decoration is, comparatively speaking, a modern art; that fifty years ago it was rare, and a decade earlier practically unknown. This sounds strange enough nowadays, when flowers on the table are so much a matter of course that the simplest people would think something was very much amiss if they were absent.

These flowers on the table of every day and table decoration are two distinct things, and should be treated as such.

For Every Day.—For every day a centrepiece of moderate dimensions and fairly low is the best choice. Silver is peculiarly suitable for the table, and a silver bowl makes a very nice centrepiece. It has to be moved continually, on and off, so all loose trails of foliage and heavy-headed flowers that need much adjusting, or that fade quickly, should be avoided. Roses, for example, are distinctly troublesome—most varieties, at all events. The sweet pea is an ideal table flower, and Shirley poppies and the light, dainty flowers rather than those of a coarser, showier sort. An “all-round” arrangement, as already described, is, of course, the best, and a wire holder of some kind is absolutely necessary for neatness and stability. In winter a fern or small plant set in the centre bowl is often a simple solution of all decorative problems; it answers well enough, provided always the same plant is not left there too long. In any case it is a little monotonous, and to vary this the space round the pot should be filled with water, and flowers slipped in, to surround and to mingle with the fern. A very few will make a fine show, and the means by which the effect is obtained is not readily perceived—a “dodge,” in short. When the fern objects to standing in water, or when



A WINTER DINNER TABLE DECORATION.

An effective arrangement of fruit—grapes, pine-apples, apples, etc.—and chrysanthemums.

no flowers are to be had, holly, sea lavender, or small sprays of winter cherry (*Physalis*) can be substituted; these are used dry, of course. For a Christmas table a large bowl of red, blue, and gold china looks very festive with a flowering hothouse plant, such as a poinsettia, or, failing this, a small palm, surrounded in this way with holly and mistletoe. A Winter Cherry *Capsicum* (*Solanum Pseudo-Capsicum*) and mistletoe is a very good combination.

Instead of a single bowl, four small pots of white Staffordshire china can be grouped together in the middle of the table. With scarlet anemones it looks particularly well. Placed at the corners they are apt to be in the way. The aim of flowers on the dinner-table should be the best appearance for the longest time.

For Special Occasions.—With table decoration the case is different. For dinner parties, weddings, or for any special occasion, whatever is most effective should be chosen, irrespective of other considerations. Even style should be thought of, since style in table decoration alters, just as in everything else. Generally speaking, "fashion" in connection with flowers is unthinkable; but with table decoration insensibly a consciousness of style makes itself felt, and it is as well not to ignore it.

Just now taste turns towards a certain simplicity instead of elaboration, profusion, and cost. True, all three may be present, but subordinated to attain the desired result, which—if the paradox may pass—is best described as an elaborate simplicity. As for all such "aids" as coloured silks and scarves, embroidery, tinsel, ribbon, and the like, their sole survivor is the white square or circle of rich linen, lace, or drawn thread work.

Beautiful colour schemes, originality, and the nicest arrangement—on these the best table decorations are now based.

At night, when the lights are concentrated on the table, the colour of the candle shades needs only be taken into consideration; by day there are hangings and wall-papers

to reckon with. Certain flowers look better, too, by daylight. Dark Russian violets, with lily of the valley, are nice on a luncheon table. A round or an oval table will look better if the decorations are circular or oval; and, unless the table is very large, it is much better to keep them low and flat. It does not make conversation easy to have the opposite side almost hidden.

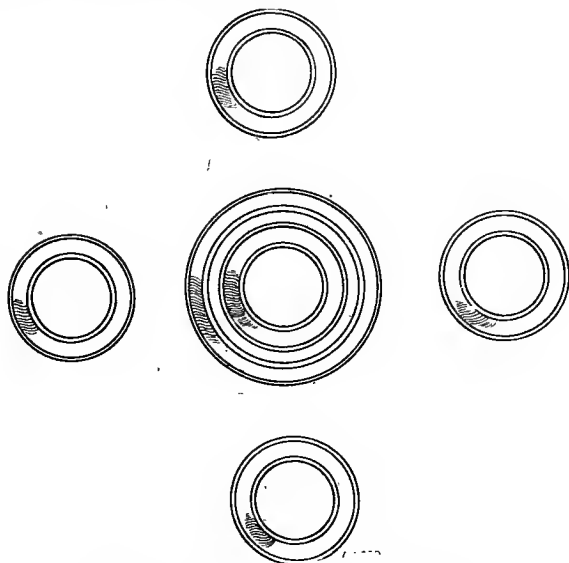


FIG. 1.—A CIRCULAR ARRANGEMENT.

The four small rings are made of zinc, and may be obtained at any florist's.

For Luncheon.—A flat, circular arrangement, then, having been decided on for the round luncheon-table, the next point is how to make it interesting and a little out of the common. If it is decided not to show the flower receptacles at all, tins such as florists sell for wreaths answer very well indeed. Two or more, according to the size of the

table, should be bought, in graduated sizes, so that one can go inside the other, and the "nest" so formed placed in the centre of the table and filled with flowers—say, dark Russian violets in the outside ring, pale violets in the next, and a clump of white in the middle. Or pansies, violas, and double white arabis. A glass in the centre, to give a little height and variety, can be used, but hidden with drooping flowers and leaves.

At Night.—For the evening four or six smaller rings should be filled with whatever flowers are chosen, and each

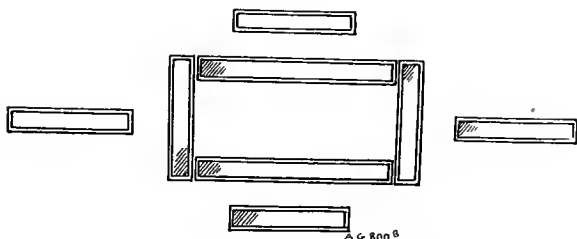


FIG. 2 —A RECTANGULAR ARRANGEMENT.

The shallow trays used in this arrangement are of rectangular shape. They are made of zinc, and may be purchased at any florists.

candlestick placed in the little wreath so formed. (See diagram No. 1.) If these cannot be had in the right sizes they can be made for a small sum, and they are well worth having. The straight kinds can always be had (see diagram No. 2), and with these an endless variety of squares and oblongs can be made, and a whole series of admirable table decorations evolved on these lines. For a large table where general conversation is impossible the decorations may be higher. A big cut-glass bowl filled with a crowd of long-stemmed pink and crimson roses looks lovely, with the four candlesticks arranged round it, and beside each candle, reaching up nearly to its pink shade, more of the roses in cut-glass vases or bowls. A very long

table would be better with three large bowls at intervals, and more candlesticks, and roses interspersed.

Glass always looks well for table decorations. Clear green for freesias and maidenhair; dull "opal" for yellow and white carnations; Christmas roses and red foliage in clear glass—these are the merest suggestions.

Children's Parties.—Decorations for children's parties should strike an individual note if they are to be

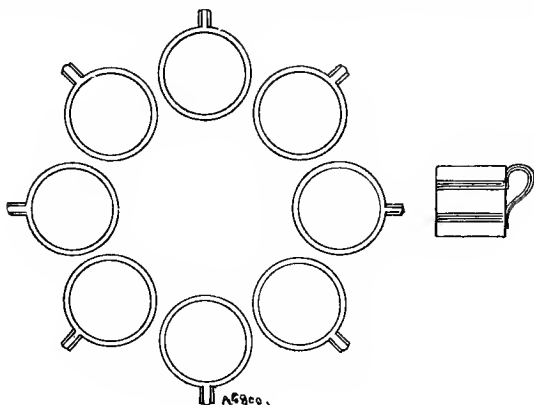


FIG. 3.—DESIGN FOR A CHILDREN'S PARTY.

Eight small mugs, like the one figured, are used in this arrangement.

admired of small people. Here is one idea that is sure to be a success, and is not difficult of achievement. It entails about a dozen of the little green mugs which most cheap china stores or bazaars sell at one penny each. These are arranged in a circle, an inch or so apart, with the handles turning out, and filled with nosegays of small flowers, as snowdrops in spring, or alternate bunches of pink and white. (See diagram No. 3.)

In the middle of this circle a pink and white birthday-cake could be accommodated.



INDEX.

	PAGE		PAGE
Acacias for Room Culture	64	Balcony Gardens	38
Acorns in Bottles	113	Baskets, Plants for	
Ada aurantiaca	102	Hanging	110
Adiantum cuneatum	82	Begonia Rex	62
Agathea cœlestis	70	Belladonna Lily, The	78
Alce variegata	100	Bermuda Buttercup, The	78
Alonsoa incisifolia	70	Bermuda Lily, The	78
Amaryllis belladonna	78	Berry-bearing Shrubs	27
Annuals for Boxes	24	Blue Gum, The	62
Annuals for Roof Gardens	52	Blue Marguerite	70
Anthericum variegatum	62	Boxes, Annuals for	24
Aralia, The	61	Autumn Decoration of	26
Araucaria excelsa	61	Bulbs for	30, 34
Ardisia crenulata	92	Cheap Display in	14
Artillery Plant, The	63	Compost for	13
Arum Lily, Treatment of	69	Drainage of	13
Arum sanctum	70	Earthenware	10
Asparagus plumosus	62	Ferns for	35
Sprengeri	62	Flowering Plants for	24
Aspidistra lurida variegata	61	Foliage Plants for	25
Auricula, The	70	Fragrant Plants for	18
Australian Pitcher Plant,		Hardy Plants for	19
The	106	Iron or Zinc	10
Autumu, Window Boxes in	26	Ornate	12
Azalea indica	64	Shady, Plants for	18
mollis	65	Shrubs for	23
Azaleas, Treatment of	66	Simple Display in	16
Balconies, Climbers for	40	Spring Decoration of	30
Plants for	41	Spring-flowering Plants	
		for	32

	PAGE		PAGE
Boxes—		Cobweb House-leek, The ...	100
Summer Decoration of ...	14	Colour Harmonies ...	21
Superior Display in ...	16	Composts for Potting ...	133
Tender Annuals for ...	25	Coronilla glauca ...	70
Winter Decoration of ...	27	Creeping Jenny, The ...	111
Wooden ...	11	Cyclamen, Treatment of ...	67
Bulbs for Room Culture ...	78	Cyperus alternifolius ...	62
in Bowls ...	76	Cypripediums for Room	
in Fibre ...	75	Culture ...	101
in Moss ...	76	Cytisus racemosus ...	64
in Pots ...	73		
in Water ...	76	Daffodil, The ...	78
		Daphne indica ...	64
Cacti, Culture in Rooms ...	97	Darlingtonia californica ...	106
Kinds of ...	97	Davallia bullata ...	83
Propagation of ...	100	Deutzia gracilis ...	65
Calceolaria, The ...	70	Dielytra spectabilis ...	70
Californian Pitcher Plant,		Treatment of ...	68
The ...	103	Dionæa muscipula ...	106
Calla Lily, Treatment of,		Dracænas for Rooms ...	62
The ...	69	Drosera rotundifolia ...	107
Camellias ...	64		
Campanulas, Treatment of ...	57	Echinopsis for Room Culture ...	98
Candle Plant, The ...	100	Elephant's Ear Begonia ...	62
Cannas in Boxes ...	22	Elk's Horn Fern, The ...	82
"Carrot Fern," The ...	114	Epidendrums for Room	
Cephalotus folicularis ...	106	Culture ...	101
Chestnuts in Water, Grow-		Erica gracilis and hyemalis ...	70
ing ...	114	Ericas and Epacrises,	
Chinese Primula, The ...	70	Treatment of ...	66
Chionodoxas ...	78	Ericas for Room Decoration ...	64
Chrysanthemums in Boxes ...	26	Eucalyptus globosa ...	62
Cineraria, The ...	70	Eulalia japonica ...	62
Clematises for Walls ...	163	Evergreen Firethorn, The ...	162
for East Walls ...	162		
for House Walls ...	156	Fatsia japonica ...	61
for North Walls ...	161	Feeding Plants ...	138
for Porches ...	168	Fern Balls ...	83
for South Walls ...	164	Cases, Management of ...	89
for West Walls ...	163	Ferns for Window Boxes ...	35
Planting ...	159	in Porous Jars ...	82
Pruning ...	159	in Rooms ...	81

	PAGE		PAGE
Ferns—		Hyacinth, The	78
in Wardian Cases	86	Hydrangeas in Boxes ...	21
under Glass Shades ...	84		
<i>Ficus elastica</i>	61	Indiarubber Plant, The ...	61
Fig-leaved Palm, The ...	61	Reducing a Tall	148
Fire Place Decorations ...	126	Insectivorous Plants ...	104
Flannel, Growing Plants on	113	Irises	78
Flower Receptacles	179	<i>Isolepsis gracilis</i>	62
Flowers in Rooms	170	Ivies for Walls	161
Arrangement of	174	Ivy-leaved Toadflax	110
Japanese Methods ...	175		
Wild, Arranging	178	Jacobean Lily, The	78
Foliage, Cleansing	142	Japanese Fern Balls	83
Fragrant Plants for Rooms	116	Garden, A.	120
Frozen Plants, Treatment of	144	Quince	162
<i>Fuchsia procumbens</i>	110	Trees, Culture of	93
Fuchsias, Treatment of ...	68		
		Ladder Fern, The	82
<i>Genista</i> , The	64	Lady's Slipper Orchid ...	101
<i>Geranium</i> , Balsam-scented	117	<i>Lælia harpophylla</i>	102
Citron-scented	117	Lemou Tree, Culture of ...	92
Ivy-leaved	110	Lilies for Indoor Culture ...	78
Peppermint-scented ...	117	Liliums for Culture in Rooms	78
Scented-leaved	116	Lily of the Valley	70
Zonal	69	<i>Linaria cymbalaria</i>	110
Glory of the Snow, The ...	78	<i>Lippia citriodora</i>	116
Golden Polypody, The ...	82	<i>Lotus peliorhyncus</i>	110
<i>Grevillea robusta</i>	62		
Guernsey Lily, The	78	Maidenhair Fern, The ...	82
		Maiden's Wreath, The ...	70
Harebell, The	70	Mamillarias, Culture of ...	98
Hare's-foot Fern, The ...	82	Manures for Feeding	
Hart's-tongue Fern (<i>Scelopendrium</i>)	82	Plants	138
Health of Plants... ..	141	Manures, Liquid	140
Heaths, Treatment of ...	66	Marguerite, The	70
Heliotropes, Treatment of	68	Mask Flower, The	70
<i>Helxine solieroli</i>	112	<i>Masdevallia harryana</i> ...	101
House Gardens	118	Monarch of the East, The...	115
House Walls, Climbers on	156	Mother o' Thousands, The	111
Huntsman's Horn, The ...	107	Musk, Treatment of ...	68
		Narcissus, Culture in Rooms	78

	PAGE		PAGE
Nerium oleander	64	Plants—	
New Zealand Pine, The ...	61	Treatment of Frozen ...	144
Novel Plant Culture	112	Treatment of Sickly ...	142
Odontoglossums for Rooms	101	Porches	46, 166
Oleander, The	64	Pot Guard, A	12
Treatment of	66	Pots, Kinds to Use	131
Oncidiums for Rooms ...	101	Pots, Ornamental	181
Onion Plant, The	78	Potting, Compost for ...	133
Ophiopogon jaburan varie-		Indoor Plants	131
gatum	62	Plants, Right and Wrong	
Opuntias, Culture of	97	Way of	134
Orange Tree, Culture of ...	92	Primula, The	70
Orchids, Kinds for Room		Propagation of Cacti ...	151
Culture	102	of Plants	145
Orchids for Room Culture	102	by Cuttings	146
Orchids for Window Case		by Division	150
Culture	102	by Leaf Cuttings	151
Othonna crassifolia	110	Offsets	150
Palms for Rooms	62	by Seeds	145
Parlour Palm, The	61	by Stem-rooting	148
Pests and Ailments of		Rat's-tail Cactus, The... ..	110
Plants	151	Resurrection Plant, The ...	116
Brown Leaf-tips	154	Ribbon Fern, The	82
Brown Spots in Leaves ...	155	Roof Gardening	47
Greenfly	152	Roof Gardens	47
Leaves Turning Brown ...	155	Annuals for	52
Red Spider	154	Climbers for	52
Scale Insects	153	Growing Plants on	50
Split Leaves	155	Plants for	54
Thrips	154	Shrubs for	51
Worms	152	Sites for	48
Pelargoniums, Ivy-leaved ...	110	Soil for	51
Treatment of	69	Rooms, Bulbs for	73, 78
Phlebodium aureum	82	Arranging Flowers in ...	170
Phyllocacti, Culture of ...	98	Ferns in	81
Pigeon's-beak Trefoil, The	110	Flowering Plants for ...	64, 70
Pilea muscosa	63	Flowers in	170
Pistol Plant, The	63	Foliage Plants for	61
Plants, Health of	141	Fragrant Plants for ...	116

	PAGE		PAGE
Rooms—		Succulents, Kinds of ...	100
Fruiting Plants for ...	90	Sundew, The ...	107
Hanging Baskets in ...	110	Sweet Peas, Culture in Boxes	22
Insectivorous Plants in ...	104	Sweet-scented Verbena, The	116
Japanese Trees in ...	93	Table Decoration ...	182
Novel Plant Culture in ...	112	At Night ...	186
Orchid Culture in ...	102	For Every Day ...	182
Plants for Gas-lighted ...	61	For Children's Parties ...	187
Plants for Non Gas-		For Luncheon ...	185
Lighted ...	62	Tradescantia, The ...	112
Rose Culture in ...	108	Tulip, The ...	78
Treatment of Plants in	63, 67	Umbrella Plant, The ...	62
Rose of Jericho (Anastatica)	116	Vallota purpurea ...	78
Roses, Culture of ...	108	Venus's Fly Trap, The ...	106
for Rooms ...	108	Verandahs, Shady ...	44
for Walls ...	162, 164, 167	Sunny ...	43
Sarracenias ...	107	Wandering Jew, The ...	111
Saxifraga sarmentosa ...	111	Walls, Climbers on House	156
Scarboro' Lily, The ...	78	Wardian Cases ...	87
Shrubs, Arranging in Boxes	28	Ferns for ...	88
Berry-bearing ...	27	Watering Indoor Plants ...	129
for Roof Gardens ...	51	Window Boxes ...	10
Green-leaved ...	28	Window Cases, Construc-	
Variegated ...	27	tion of ...	57
Side-saddle Flower, The ...	107	Insectivorous Plants in ...	104
Snowdrop, The ...	78	Orchids for ...	102
Spanish Moss ...	116	Window Gardening in	
Spiræas, Treatment of ...	63	London ...	20
Sponge, Growing Plants		Winter Cherry, The ...	90
on a ...	112	Winter, Window Boxes in...	27
Squirrel's Foot Fern, The	82		
Succulent Plants in Rooms	97		



ILLUSTRATIONS.

	PAGE		PAGE
<i>Adiantum Pacottii</i>	83	Japanese Trees, Dwarf ...	94
<i>Aloc variegata</i>	132	<i>Lilium auratum</i>	80
Artillery Plant	63	Mustard Growing on a Sponge	113
<i>Arum Lilies</i>	139	<i>Pæonies</i> , A Basket of ...	176
<i>Asparagus plumosus</i> ...	59	Porch Decorated with a Rose	166
<i>Aspidistra</i> in Flower ...	153	Resurrection Plant, The	143, 147
Balcony Garden, A	39	Roof Garden in South Kensington	55
Bulbs in Glasses	77	Roof Garden in South- wark	49, 53
Cacti, A Group of	99	Rose of Jericho	117, 119
<i>Campanula isophylla alba</i> ...	65	<i>Sarracenia flava</i>	102
Carrot Fern, The	115	<i>Sedum sarmentosum varie-</i> <i>gatum</i>	111
Children's Party, Decora- tion for	187	Sun-trap Bay Window ...	121
<i>Cœlogyne cristata</i>	103	Table Decoration, A Winter	183
<i>Cytisus racemosa</i>	72	Designs for	185, 186
<i>Davallia canariense</i>	87	<i>Tradescantia zebrina</i> ...	109
Fernery, A Miniature ...	85	Verandah Garden, A	45
Fire-place Decoration ...	127	Window Box, A Prize ...	17
Fuchsia, A Standard ...	91	A Showy	19
Hare's-foot Fern, The ...	87	Garden, A Hairdresser's	23
<i>Helxine solieroli</i>	137	A Shady	29
House Front Decorated with Creepers	158	A Simple	15
Houseleek Growing in Water	115	A Sunny	8
<i>Hydrangea hortensis</i>	123	Window-sill Case, A	58
India-rubber Plant, Stem- rooting	149	Garden, A	11
<i>Iris alata</i>	33	Garden in Spring	31
Japanese Maple, A Dwarf	96	Zonal Pelargonium, A ...	135

PLATES.

	Facing page		Facing page
Adiantum cuneatum	88	Primula, A Star-Flowered ...	68
Auricula, An Alpine	154	Tulips, A Bowl of	74
Balcony Garden, A	136	Window Box, A Floriferous	140
Clivia miniata	60	Window Garden, A Charming	148
Indoor Plants, A Group of ...	124	A Hotel	36
Japanese Tree, A Dwarf	94	A Neat and Showy	26
Pelargonium, A Regal	130	A Shady	106
		A Suburban	162
		A Town	<i>Frontispiece</i>

THE USE OF CLAY'S FERTILIZER

THE PLANT FOOD OF RENOWN
WILL ENSURE THE HEALTH OF ALL YOUR
FOLIAGE AND FLOWERING PLANTS
AND MAKE
WINDOW AND INDOOR GARDENING
AN EASY AND DELIGHTFUL HOBBY.

It produces all Flowers, Foliage, Fruits, and Vegetables, in profusion,
and in the highest perfection. It is indispensable for all horticultural
purposes.

**EVERY EXHIBIT GROWN WITH CLAY'S FERTILIZER
CATCHES THE JUDGE'S EYE** - - - -



TRADE MARK.

Sold everywhere in **6d.** and **1/-** Tins; and in **Branded**
and **Sealed Bags**: 7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**;
56 lbs., **12/6**; 112 lbs., **20/-**. Or direct from the Works,
Carriage Paid in the United Kingdom for Cash with Order
(except 6d. tins).

**Every Genuine Tin, Bag, and Seal bears
the Trade Mark, as at side.**

Full directions for use are included in the Horticultural Wonderbook,

Clay's Successful Gardening.

4th Edition; 276 pages; bound in cloth; well illustrated. Full of
up-to-date, practical information upon Gardening under Glass and in
the Open, the Culture of Specialty Flowers, Rock Suburban Garden-
ing, &c., &c., by Eminent Writers. Price **9d. net**, from all Seedsmen,
or Post Free for the amount direct from the Publishers as under.

*Write for Price List of Crushed Bones, Bone Meal, and other Manures,
Chemicals, and Sundries.*

CLAY & SON, Manure Manufacturers
and Bone Crushers.
STRATFORD, LONDON, E.

H. N. ELLISON, WEST BROMWICH.
BULBS. ON APPROVAL. 28-page Catalogue, Carriage Paid. Post Free.
FERNS. GOLD MEDAL COLLECTION. List Free.
SEEDS. ON APPROVAL. CARRIAGE PAID. 48 page Catalogue, Profusely Illustrated, Post Free.
CACTI. CATALOGUE. 168 Illustrations. 6d., which is allowed off first order. CACTI, 5/-, 6/6, 12/- dozen.
H. N. ELLISON, WEST BROMWICH.

PRACTICAL GARDENING WORKS.

Crown 8vo, bound in cloth, 480 pages, 64 Plates and 40 explanatory Diagrams. **Price 7/6 net:** by Post, packed in box, **8/-**

The Flower Garden.—A Practical Up-to-date Work on the Formation, Design, Planting and Management of the Flower Garden, with Description and Cultivation of Flowers and Plants adapted for Outdoor Culture. By T. W. SANDERS, F.L.S., F.R.H.S.

Crown 8vo, bound in cloth, 508 pages, 150 Illustrations, 8 Photo-Plates, and 5 Coloured Plates of Insect Pests. **Price 5/- net:** by Post, packed in box, **5/6.**

Vegetables and their Cultivation.—An Up-to-date Practical Treatise on the Cultivation and Forcing of Vegetables, Saladings, and Herbs for Home Use and Exhibition; the Formation of the Vegetable Garden; Manures and their Uses; Pests and Diseases, and their Eradication, etc., etc. By T. W. SANDERS.

Crown 8vo, bound in cloth, 438 pages, 154 Illustrations, 16 Plates printed on art paper, 2 Coloured Plates and Coloured Frontispiece. **Price 5/- net:** by Post, packed in box, **5/6.**

The Amateur's Greenhouse.—A Complete Guide to the Construction, Heating and Management of Greenhouses, and the Cultivation of Greenhouse Plants. By T. W. SANDERS, F.L.S.

Crown 8vo, bound in cloth, 476 pages, Illustrated by 255 reproductions of Photographs. **Price 5/- net:** by Post, packed in box, **5/6.**

Easily Grown Hardy Perennials.—Directions for the Culture and Propagation of Hardy Perennials, notes on Habit and Uses, Derivation, Order, Genera, Species, English Names, etc. By GEORGE H. VOS, B.A. Editorially supervised by T. W. SANDERS.

PUBLISHED BY

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, London.

PRACTICAL GARDENING WORKS.

Thirteenth Edition. Revised and Improved. Crown 8vo, bound in cloth. **Price 3/6 net**: by Post, packed in box, **3/10**.

Encyclopædia of Gardening.—A Concise Dictionary giving in alphabetical sequence the Cultivation and Propagation of Plants, Flowers, Fruit, Vegetables, Trees, and Shrubs, with Descriptions, Popular and Technical Names, Order, Native Country, Date of Introduction, Species in Cultivation, Time of Planting, Position, Suitable Soil, Treatment, Proper Temperature, &c. By T. W. SANDERS, F.L.S., F.R.H.S.

Crown 8vo, bound in cloth, 198 pages, 16 Photo Plates, Frontispiece, and 64 Illustrations. **Price 2/6 net**: by Post, in box, **2/10**.

Roses and their Cultivation.—A Practical Guide to the Cultivation of the Rose, Outdoors and Under Glass; Schedule of all the Varieties Worthy of Culture; Pests and Diseases, and How to Eradicate them. By T. W. SANDERS, F.L.S.

Crown 8vo, cloth, 208 pages, 46 Illustrations and Frontispiece.

Price 2/6 net: by Post, packed in box, **2/10**.

Chrysanthemums for Garden and Greenhouse.

—A Practical Treatise on the Culture of Early-flowering, Decorative, Mid-season and Late Chrysanthemums, with a complete List of Garden Varieties, Description, Colour, Habit, Time of Flowering, etc. By D. B. CRANE, F.R.H.S. Edited by T. W. SANDERS, F.L.S.

Crown 8vo, cloth, 212 pages, fully Illustrated.

Price 2/6 net: by Post, packed in box, **2/10**.

Bulbs and their Cultivation.—A Practical Guide to the Cultivation and Propagation of Hardy, Hothouse and Greenhouse and Tuberous-rooted Plants, including Lists of all the Genera, Species and Varieties worth Growing in the British Isles. By T. W. SANDERS, F.L.S.

Crown 8vo, cloth, 198 pages, and 85 explanatory Diagrams.

Price 1/6 net: by Post, **1/9**.

Alphabet of Gardening.—A full and Practical Guide to the Principles of Horticulture for Amateur and Professional Gardeners. Budding, Grafting, Pruning, Hybridising, Forcing, etc. By T. W. SANDERS, F.L.S., F.R.H.S.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Pansies and Violets.—A Guide to the Cultivation of the Show, Fancy and Tufted Pansy or Viola; Violets; Selections of Varieties, etc., etc. By D. B. CRANE, F.R.H.S.

PUBLISHED BY

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, London.

PRACTICAL GARDENING WORKS.

Crown 8vo, 118 pages. Illustrated.

Price 1/- net: by Post, **1/3**; bound in cloth, **1/6**; by Post **1/9**.

Grapes and How to Grow Them.—A Practical Book dealing with the History, Culture, Management and Propagation of Vines in Vineries, Greenhouses and in the Open air; Insect and Fungoid Pests, etc. By J. LANSDELL, F.R.H.S.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Sweet Peas and Their Cultivation.—For Home and Exhibition. A Practical Treatise on the Selection and Successful Culture of Sweet Peas; History and Development; Raising New Varieties; Exhibiting, etc. By C. H. CURTIS, F.R.H.S.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Dahlias and their Cultivation.—A Treatise on the Propagation, Culture and History of Dahlias for Garden Decoration and Exhibition; Varieties, etc. By J. B. WROE.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Chrysanthemums and How to Grow Them for Exhibition.—A Complete Guide to Growing for Exhibition, with Instructions for Timing and Stopping—Taking the Buds—Selections of the Best Varieties, etc. By J. B. WROE.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Lawns and Greens.—A Guide to the Formation and Management of Lawns, Tennis and Croquet Courts, Bowling and Golf Greens, Cricket Grounds: Mowers, Rollers, etc.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Mushrooms and their Cultivation.—A Practical Handbook for Amateurs, dealing with the Culture of Mushrooms in the Open-air and in Sheds, Cellars, and Greenhouses; Cooking Mushrooms; Edible Fungi, &c. By T. W. SANDERS, F.L.S.

Crown 8vo. Illustrated.

Price 1/- net: by Post, **1/2**; cloth, **1/6**; by Post, **1/8**.

Tomatoes and How to Grow Them.—A Handbook dealing with the Cultivation under Glass and in the Open Air; Pests, Diseases, etc.

PUBLISHED BY

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, London.

USEFUL BOOKS ON LIVE STOCK, MARKET GARDENING, SMALL HOLDINGS, ETC., ETC.

Price 1/- net each : by Post 1/2. Bound in cloth 1/6 : by Post 1/9.

Edited by T. W. SANDERS, F.L.S.,

Editor of "Farm and Garden," etc.

The Horse: Its Care and Management. A Practical Treatise on Breeding, Rearing, Feeding, Ailments, Diseases, etc.; Management of the Donkey, etc., etc. By H. E. FAWCUS.

Dairy Cows and the Dairy. A Practical Treatise on the Best Breeds of Dairy Cows and their Management; Construction and Management of the Dairy; Butter and Cheese Making; Milk and the Law, etc., etc. By JOHN WALKER.

Sheep: Their Management and Breeding. Various Breeds, Methods of Rearing, Fattening and Marketing, Diseases and Ailments, with Remedies, etc. By JAMES H. MUIR.

Pigs for Profit. A Complete Guide to the Breeding, Rearing, and Management of Pigs; Killing, Dressing the Carcase, Bacon Curing, Ailments of Pigs, Sty Building, etc., etc. By J. WALKER.

The Goat: Its Use and Management. A Guide to the various Breeds, Management, Uses for Milk and Cheese Production, Draught Purposes, etc., etc. By J. T. BIRD.

Fowls for Profit. A Practical Treatise on Poultry Farming; Selection of the Best Breeds for Eggs and the Table; Management, Feeding, and Ailments; Fattening, Killing, Trussing, and Marketing, etc. By A. TYSILIO JOHNSON.

Chicken Rearing and the Management of Incubators. A Treatise describing the Structure of an Egg; Rearing of Chickens by natural and artificial means, etc. By A. T. JOHNSON.

PUBLISHED BY

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, London.

USEFUL BOOKS—*continued.*

Price 1/- net each; by Post 1/2. Bound in cloth 1/6; by Post 1/9.

Ducks, Geese and Turkeys for Profit. A Guide to the Proper Management of Ducks, Turkeys, Geese, Guinea-Fowls and Swans; Chief Ailments, etc. By A. T. JOHNSON.

Rabbits for Pleasure and Profit. The Rearing and Management of Rabbits, with a Description of the Best Breeds, Suitable Foods, Ailments, Marketing, etc. By J. T. BIRD.

Bees for Profit and Pleasure. A Practical Handbook dealing with Bees and Beekeeping in all its various phases. By H. GEARY.

The Small Holder's Guide. A Practical and Illustrated Guide to the subject of Small Holdings and their successful Management on Up-to-date Lines. Edited by T. W. SANDERS, F.L.S.

Green Crops—Broccoli, Cabbage, Herbs, etc. A Practical Treatise on the Cultivation of Green Crops and Herbs for Market, Packing and Marketing, etc. By T. W. SANDERS, F.L.S.

Root Crops—Potatoes, Onions, Carrots, Turnips, etc. A Practical Treatise on the Cultivation of Roots, Bulbs, and Tubers, with a full description of the various Insect, Fungoid and other Pests, and Remedies, etc. By T. W. SANDERS, F.L.S.

Asparagus, Beans, Peas, Rhubarb, Marrows, etc. A Practical Treatise on the Culture of Peas, Beans, Rhubarb, Celery, Asparagus, Marrows, etc.; Soils; Pickling and Preserving the Crops; Pests, Diseases, etc. By T. W. SANDERS, F.L.S.

Cucumbers, Mushrooms, Salads, Tomatoes, etc. A Practical Treatise on the Cultivation of Cucumbers, Mushrooms, Watercress, Salads, etc.; Preparing and Packing for Market; Pests and Diseases. By T. W. SANDERS, F.L.S.

PUBLISHED BY

W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate Street, London.

